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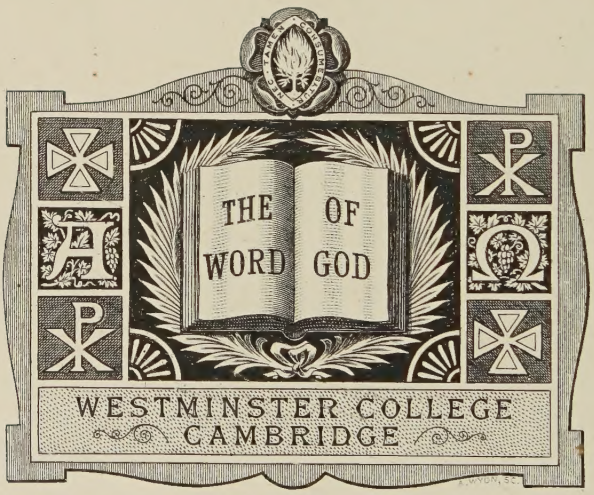

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Palestine Exploration Quarterly

PALESTINE EXPLORATION FUND.

Patron—THE KING.

Quarterly Statement

FOR 1902.

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THE
PALESTINE EXPLORATION FUND.

NOTES AND NEWS.

Mr. Macalister has reached Jerusalem and will commence work under the new Firman as soon as it reaches him. The Committee are daily expecting to hear that the Firman has been granted, and they have requested Mr. Macalister, pending its receipt, to carry out some work at Jerusalem for which a permit to dig is not necessary. The site selected for excavation under the new Firman is Gezer, a place which has a continuous history from pre-Israelite times to the period of the Crusades. It was at Gezer that M. Clermont-Ganneau discovered the bi-lingual inscriptions, Hebrew and Greek, defining the limits of the ancient city.

On November 4th there was a serious affray in the courtyard of the Church of the Holy Sepulchre between Latins and Greeks. Five Franciscans were dangerously wounded, including the vicar-custodian, a Frenchman; and a Turkish officer is reported to have lost an eye in attempting to separate the combatants. The conflict was due to a dispute as to the respective rights of the Latins and Greeks to sweep certain steps in the courtyard. A large stone thrown from the top of the church during the disturbance unfortunately struck and cracked the interesting tombstone of Philip d'Aubigné (*see Quarterly Statement*, 1887, p. 76).

This week, a Jerusalem correspondent writes on November 7th, we had a visit from Prince Adalbert, the German Emperor's third son, and great crowds turned out to give him a welcome. As he arrived after dark the whole road from the station to the Hotel du Parc, upwards of a mile, was illuminated with lamps and sprinkled with water.

Information has reached the Committee that a forged inscription has recently been offered for sale at Jerusalem under circumstances which seem to point to renewed activity on the part of the forgers whose work attracted some notice a few years ago.

Dr. Schick writes that the Armenians have purchased much of the land east and south-east of the Cœnaculum (David's Tomb), which was the scene of Dr. Bliss's excavations for the Fund. The ground east of the road from the Zion Gate to the Valley of Hinnom has been resold to the Franciscans, who propose to carry out excavations in it. The Armenians are excavating the portion they retained, and are removing the earth down to the surface of the rock. They have found already several rock-hewn cisterns, remains of houses, rude mosaic pavements, and the continuation southward of the paved street partly traced by Dr. Bliss. They have also cleared out a tank 15 feet long and 12 feet wide, which was 20 feet below the surface of the ground: beneath this was a rock-hewn cistern 12 feet deep.

Dr. G. H. Mitchell, the Director of the American School of Oriental Study and Research, and his assistant, who is a trained artist and draughtsman, are making careful measurements of all that is found, and their reports will be looked forward to with interest. It is satisfactory to know that the task of recording discoveries at Jerusalem is in such excellent hands, and the Committee of the Fund heartily wish the American School every success in their undertaking.

Dr. Schick also writes:—On the evening of October 1st we had a very heavy thunderstorm, with much lightning, and some rain, which extended over a wide area. A flash of lightning struck David's Tower, splitting the flagstaff and injuring five men. The storm broke the weather, and there have been several falls of rain since, unaccompanied by the usual high winds.

The September number of "Home Words," a magazine published in connection with Christ Church, Jerusalem, contains an article by Dr. Schick on an ancient pillar of remarkably great diameter, a

portion of which was found some 25 years ago in making excavations for a mill outside the Damascus Gate. Some time later a similar piece was found on the neighbouring ground of the Dominicans. It was at first thought that they had belonged to St. Stephen's Church, but subsequent discoveries showed that this could hardly have been the case, and Dr. Schick now regards them as portions of the pillar alluded to by Antoninus of Placentia, who was in Jerusalem about the year 560, and who narrates that "In the very middle of the road, not very far from the city" (outside the gate of St. Stephen) "stands a stone pillar, to which the Lord was first led to be scourged, which was raised by a cloud and fled away and was deposited in this place. . . . . Upon the top of it is placed an iron cross. It is ascended by means of a ladder, and lights and incense are burned there. At this place also those possessed with devils are cleansed" (Palestine Pilgrims' Text Society, vol. ii, p. 22).

Dr. Schick adds that as the pillar stood not very far from the city, yet not so far as the Church of St. Stephen, it must have been close to the spot where these two large fragments were found.

Whilst clearing out a portion of the vaults beneath the courtyard in front of the Church of the Holy Sepulchre for the construction of a cistern, it was ascertained that the rock lies near the surface beneath the west wall of the buildings on the east side of the courtyard, and throughout its whole length. There appears to be a wall of rock about 22 feet thick, with a fall on either side. The closeness of the rock to the surface beneath these buildings has long been suspected by Dr. Schick.

Water Supply.—Water has been brought at last from the "Sealed Fountain" above Solomon's Pools and 'Ain 'Atân to Jerusalem, and the inauguration ceremony took place, in the midst of drenching rain, on November 27th, the birthday of H.I.M. the Sultan. At 8 a.m. water was turned on from the pipe in the Haram esh-Sherif in the presence of the Governor, the officer commanding the troops, and the local notables, and a blessing on the Sultan and the enterprise was invoked in an eloquent prayer by Sheikh Yusuf. At 1.30 p.m. the Governor attended an inauguration ceremony of a more public character at the end of the branch pipe to the Birket es-Sultan. Here the dam was decorated with flags

and garlands festooned on poles, and many tents were pitched. In the evening the spot was illuminated, and there was much rejoicing.

The water runs in the old low-level aqueduct as far as Bethlehem. Thence it is brought, partly by 4-inch iron pipes and partly by the old aqueduct, to the city. The pipes have been mainly utilised to cut off corners, *e.g.*, they are carried straight across the hollow between the village of Sûr Bâhir and the place where the old aqueduct enters the tunnel south-east of the Hill of Evil Counsel (*see* map in *Quarterly Statement*, July, 1887). After passing through this tunnel, now a reservoir (*see below*), the water runs in pipes which cross the hill Abu Tôr, and, making a sudden bend near "Aceldama," abruptly descends to the bed of the Valley of Hinnom. From this point one branch is carried *viâ* the Dung Gate to the Haram esh-Sherif, and another up the Valley of Hinnom to the old Arab fountain on the dam of the Birket es-Sultan.

The engineer of the new waterworks has converted the tunnel of the low level aqueduct, between the village of Sûr Bâhir and Jerusalem, which is said to be 470 yards long, into a large reservoir by deepening it 9 feet 10 inches. The tunnel has been visited by Dr. Masterman and Mr. Hornstein; and the following information is taken from notes kindly supplied by the former:—The tunnel is very tortuous and, except at one spot, runs through soft chalky rock, which is easily cut. The old aqueduct has been in great part destroyed. Originally the water ran through a well cemented rock-hewn channel. At a later period earthenware pipes were laid against the western side of the channel, and covered with hard cement; most of these pipes have been removed. The roof was in some places of rock, in others the channel was covered with horizontal slabs of stone, or by two stones arranged so as to form a pent roof. Four shafts, carefully lined with stone, and still perfectly preserved, led from the tunnel to the surface. Three of these are now being utilised. The most interesting feature is a lofty circular chamber about 10 feet in diameter, which is hewn in the rock, and is near the centre of the tunnel. The chamber, lighted by magnesium wire, appeared to be covered by a domed roof from 50 to 60 feet above its floor. The workmen have tried to strike the dome from the outside, but without success. The dome appeared to be of rock, and if there was an opening to the surface it was very carefully concealed.

Sir Charles Wilson writes:—As far as I can judge, from the reports that have come to hand, there has been a most unnecessary and useless expenditure of money upon the water supply. The low-level aqueduct formerly supplied water to the Birket es-Sultan and the Haram esh-Sherif, and this aqueduct might have been repaired at slight cost. There was no necessity to lay iron pipes up hill and down dale, and to turn a tunnel into a reservoir to deliver water at the same places and at less pressure. Nor can the water be much purer, for it runs in the old aqueduct as far as Bethlehem before entering the iron pipes.

The old cistern at the lower end of the Birket es-Sultan has been cleared out, and is being converted into a covered storage reservoir for water for watering the roads. Every Friday there is a donkey and cattle market in the pool, which is also frequented by fellahîn who crush pottery on the rocks for the manufacture of *hamra*, the red cement used for coating cisterns, flat roofs, &c. The water collected in the pool is therefore not fit for any domestic purposes.

During the water famine last summer the sale of water, brought by the railway from "Philip's Fountain," went on from early dawn till long after sunset. It is estimated that from 3,000 to 5,000 skins and petroleum tins of water from this source alone were sold daily.

With reference to the tomb described by Father Vincent in the "Revue Biblique" (*see Quarterly Statement*, 1901, p. 422), it is reported that a date, 1065, has been found inscribed on two stones. The figures are very roughly cut, and are probably connected with some re-adaptation of the tomb.

M. Clermont-Ganneau writes:—There has been discovered lately in the building material of the Crusaders' Church at Abu Ghôsh a squared stone, whereon is engraved a Roman inscription mentioning a *vexillatio* (detachment) of the Xth Legion, Fretensis. This discovery inclines one to think, as I have long conjectured, that here was a fortified post with a Roman garrison charged with the duty of guarding the road from Jerusalem to Jaffa. The supporters of the theory which would place the *castellum* Emmaus of the Gospels at Abu Ghôsh, will not fail to find an argument on their side in this

discovery. However, we must not in any case exaggerate its application, and it is well not to lose sight of the fact that at 'Amwâs also Roman inscriptions have been found which prove that this place likewise was held by detached companies belonging to various legions. There must, indeed, have been quite a chain of them spread over the country between Jerusalem and the coast. It seems, too, that the Arabs long preserved the memory of the Roman *castellum* at Abu Ghôsh (Karyet el-'Enab). This is shown by the name which the old Arab geographers gave to that place—*Hisn el-'Enab*, "the fortress of el-'Enab."

Carriage Roads in Palestine.—Dr. Selah Merrill reports as follows:—Jerusalem to Jaffa, 40 miles; twenty-five years in building, and made comfortable only in 1892. Jerusalem to Hebron, 23 miles; completed in 1890. Jerusalem to Jericho, 22 miles; completed in 1898; ten years spent in building it. Jerusalem to the top of the Mount of Olives, about 4 miles; made in 1898 for the German Emperor. A branch from the Jaffa road to 'Ain Karim, less than 3 miles. A branch from the Hebron road at Solomon's Pools to Artas, about 2 miles. Jerusalem to Bireh, 9 miles; built this year (1901). The section from Bireh to Sinjil, about 10 miles, has just been let to a contractor, and work upon it has begun. The builder of the road from Jerusalem to Bireh is an Armenian, and the same man is building the section from Bireh to Sinjil. Jews and Moslems do not undertake such work. Carriages go from Jericho to the Dead Sea and the Jordan, and from Jaffa to Gaza, but across country, there being no made road. From Jaffa to Haifa the same is true, for the road that was made in 1898 for the German Emperor is now, with most of its bridges, in a ruined state.—Jerusalem, November, 1901.

Mr. Rouse writes from Rugby:—The sporting screen mentioned in *Quarterly Statement*, p. 392, is also used for partridge shooting in Calymnos, a small Greek island near Cos.

The Committee acknowledge with thanks "Al-Mashrik," an illustrated bi-monthly Roman Catholic periodical devoted to Oriental studies. It is published at Beirût, under the auspices of the Fathers of the University of St. Joseph, and is written wholly in

Arabic. Among the more important contents of the recent numbers we have noted "Archæological Notes on Lebanon," by M. l'Abbé P. H. Lammens, and "The Traditions of the Assyrians in Irak," by Dr. N. Marini.

The observations on the level of the Dead Sea which have been kindly made for the Fund by Dr. Masterman prove to be of great interest. Between October, 1900, and March 30th, 1901, the level rose 1 foot 3 inches. It then began to fall, and in December was from 9 inches to a foot lower than in October, 1900. This is apparently due to the dry winter season, 1900–1901. Dr. Masterman promises full particulars for the next *Quarterly Statement*.

The "Flora of Syria, Palestine, and Sinai," by the Rev. George E. Post, M.D., Beirût, Syria, containing descriptions of all the Phaenogams and Acrogens of the region, and illustrated by 441 woodcuts, may be had at the office of the Fund, price 21*s*.

In order to make up complete sets of the "Quarterly Statement," the Committee will be very glad to receive any of the back numbers.

The income of the Society from September 21st to December 24th, 1901, was—from Annual Subscriptions and Donations, including Local Societies, £577 17*s*. 9*d*.; from Lectures, *nil*; from sales of publications, &c., £132 6*s*. 10*d*.; total, £710 4*s*. 7*d*. The expenditure during the same period was £743 10*s*. 2*d*. On December 24th the balance in the Bank was £202 14*s*. 8*d*.

Subscribers in U.S.A. to the work of the Fund will please note that they can procure copies of any of the publications from the Rev. Professor Theo. F. Wright, Honorary General Secretary to the Fund, 42, Quincy Street, Cambridge, Mass.

The Committee will be glad to communicate with ladies and gentlemen willing to help the Fund as Honorary Secretaries.

The price of a complete set of the translations published by the Palestine Pilgrims' Text Society, in 13 volumes, with general index, bound in cloth, is £10 10*s*. A catalogue describing the contents of each volume can be had on application to the Secretary, 38 Conduit Street.

The Museum at the office of the Fund, 38 Conduit Street (a few doors from Bond Street), is open to visitors every week-day from 10 o'clock till 5, except Saturdays, when it is closed at 2 p.m.

It may be well to mention that plans and photographs alluded to in the reports from Jerusalem and elsewhere cannot all be published, but all are preserved in the office of the Fund, where they may be seen by subscribers.

Tourists are cordially invited to visit the Loan Collection of "Antiques" in the Jerusalem Association Room of the Palestine Exploration Fund, opposite the Tower of David, Jerusalem. Hours: 8 to 12, and 2 to 6. Maps of Palestine and Palestine Exploration Fund publications are kept for sale.

Photographs of Dr. Schick's models (1) of the Temple of Solomon, (2) of the Herodian Temple, (3) of the Haram Area during the Christian occupation of Jerusalem, and (4) of the Haram Area as it is at present, have been received at the office of the Fund. Sets of these photographs, with an explanation by Dr. Schick, can be purchased by applying to the Secretary, 38 Conduit Street, W.

Branch Associations of the Bible Society, all Sunday Schools within the Sunday School Institute, the Sunday School Union, and the Wesleyan Sunday School Institute, will please observe that by a special Resolution of the Committee they will henceforth be treated as subscribers and be allowed to purchase the books and maps (by application only to the Secretary) at reduced price.

The Committee will be glad to receive donations of Books to the Library of the Fund, which already contains many works of great value relating to Palestine and other Bible Lands. A catalogue of Books in the Library will be found in the July *Quarterly Statement*, 1893.

The Committee acknowledge with thanks the following:—

"Recueil d'Archéologie Orientale." Tome IV, Livraisons 22, 23. *Sommaire*:—§ 62. La stèle phénicienne d'Amrith. § 63. Le culte sur les toits chez les Sémites. § 64. Betomarsea-Maioumas et les fêtes orgiaques de Baal-Peor. § 65. La mosaïque hébraïque de Kefr Kenna. § 66. Lecture rectifiée des inscriptions, Nos. 2245, 2146, et 2009 de Waddington. From the Author, M. Clermont-Ganneau.

For list of authorised lecturers and their subjects write to the Secretary.

Subscribers who do not receive the *Quarterly Statement* regularly are asked to send a note to the Acting Secretary. Great care is taken to forward each number to those who are entitled to receive it, but changes of address and other causes occasionally give rise to omissions.

Form of Bequest to the Palestine Exploration Fund.

I give to the Palestine Exploration Fund, London, the sum of _____ to be applied towards the General Work of the Fund; and I direct that the said sum be paid, free of Legacy Duty, and that the Receipt of the Treasurer of the Palestine Exploration Fund shall be a sufficient discharge to my Executors.

*Signature*__

Witnesses _____

_____

_____

Note.—*Three Witnesses are necessary in the United States of America; Two suffice in Great Britain.*

While desiring to give publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

Subscribers to the Fund will hear with regret that Dr. Conrad Schick, who for more than thirty years has been connected with the work of the Fund, died at Jerusalem on December 23rd. A notice of his life-work at Jerusalem will be given in the April *Quarterly Statement*. Three papers and several notes in the present number show that he was active and observant to the end.

ARCHÆOLOGICAL AND EPIGRAPHIC NOTES ON PALESTINE.

By Professor Clermont-Ganneau, M.I.

10. *Dannaba and Job's Country.*—I have often had occasion to point out by signal examples, how much valuable information connected with the study of Biblical geography might be obtained from Arab sources, provided that they were consulted more systematically and with greater care than is generally bestowed upon them. Thus, a short time ago,[1] thanks to this method, I was able to offer, if not a definite solution of a geographical problem hitherto regarded as hopeless, at any rate an unexpected piece of evidence concerning it, which brings us measurably nearer to its solution, and now enables us to hope that some day it may be cleared up as completely as possible. I allude to the hitherto undiscoverable site of Mephaath,[2] a Levitical city in the country beyond Jordan (tribe of Reuben), which was still in existence in Eusebius's time under the name of Μηφαάθ, *Mephaat*, and seems to have disappeared since then without leaving the slightest trace in Arab toponymy. I have proved that it did nothing of the kind; that the *Marâṣid el-ittilâ'* still knew this place at the beginning of the fourteenth century, under the name, faithfully preserved, of عيفعة, Meifa'a, a village of el-Belḳâ, that is to say, exactly in the required position, and that consequently any one who took the trouble to make inquiries, with tact, of the natives, would have a very good chance of discovering the place under the title of *Khurbet Meifa'a*, exactly as in the case of the famous Hippos of the Decapolis, vainly sought before, which, as I had declared many years previously would be found, and was indeed found at last just where it should have been, under the foretold name of *Khurbet Sûsieh*.

I should like at the present time to apply the same method to a question of the same sort. The "Onomasticon," referring to *Dinhabah*,[3] the city of Bela the son of Beor, king of Edom,

[1] "Recueil d'Arch. Orient.," vol. iv, p. 57 *et seq.*

[2] מיפעת and מופעת, Josh. xiii, 18, xxi, 37; 1 Chron. vi, 79; Jerem. xlviii, 21.

[3] Gen. xxxvi, 32; 1 Chron. i, 43.

asserts its identity with a village named Δαννά, seven or eight miles from Esbous (Heshbon); or rather, as is his frequent custom, Eusebius mentions this village merely because of the resemblance of its name, without stating on that ground that the places are indeed the same.[1] This seems to be the meaning of the formula which he generally makes use of in such cases, and indeed employs in the present instance:—"There is even at the present day a village named," &c. St. Jerome, either because he had in his hands a better or more complete text of the "Onomasticon" than we have, or because he added to it of himself some information obtained from trustworthy sources, expresses himself in slightly different language in his Latin version of it:—"There is at this day," he says, "a *villa Dannaba* eight miles from Areopolis, as one goes toward the Arnon; and there is also another *Dannaba* on Mount Phogor seven miles from Esbus."

Even if we consider this passage, as we ought, entirely apart from the Biblical Dinhabah of the land of Edom, there results from it this much at least, that there must have been, in the northern parts of Moab, either in the neighbourhood of Hesbon or between the Arnon and Areopolis, one, or perhaps two, places named Dannaba. However, up to the present time no explorer has found in those regions any place in the least degree answering to this name. Does this imply that the suggestion of the "Onomasticon" is a wrong one, or that since the fourth century the name has been lost? The answer to this question—a very decided answer, to my mind—is given us by Yâḳût's *Mo'jam el-Buldân*, and by the *Marâṣid*,[2] who catalogue in its alphabetical place the name of a certain *Dhannaba*, ذَنَّبَة, "a place in the province of el-Belḳâ." No one can doubt the identity of this *Dhannaba* with the Dannaba of the "Onomasticon," both of them being situated in the same region. We can thus prove that the name was preserved without alteration by local tradition for some ten centuries: there is no reason to suppose that it has utterly disappeared since. I am convinced that a diligent search conducted on the spot would enable us to rediscover it, as in the

[1] I avail myself of this opportunity to point out that modern critics often do not take into account these limitations of the "Onomasticon," and are too ready to charge Eusebius with geographical blunders of which he is not always guilty, through their habit of taking his more or less happy comparisons of place-names for actual geographical identifications.

[2] Compare Le Strange, "Palestine under the Moslems," p. 438.

case of Meifa'a, either in its primitive form *Dhannaba*, or in one of those diminutive forms of which the Bedouin Arabs are so fond: *Dhuneibeh*, *Dh'neibeh*. Let future travellers see to it.

There is all the more chance of finding it because the name and its cognate derivations are pretty general in Syrian toponymy. I may mention, among others,[1] a place in the Haurân whose name is absolutely the same, *Dhuneibeh*,[2] *Dh'neibeh*, between Sheikh Miskîn and Zor'a. This comparison is particularly instructive because an inscription in that country tells us, as I have already pointed out,[3] the ancient form of the place in the Haurân: Δάναβα, gen. Δανάβων. This form, as we see, is remarkably like that given in the "Onomasticon," for its Moabite Dannaba.

I should state that the existence of the Danaba in the Haurân offers, perhaps, an interest of another kind. It may, indeed, have contributed in a certain measure to the localisation of Job's country by popular legend in that region. Purely imaginary though it may be, this legend, which is still alive and even very popular at the present day, was at an early period adopted by the Arabs, and connected by them with various spots near Dh'neibeh: Nawâ, which was called Job's home by the ancient Arab geographers; Deir Eyyûb, "Job's convent," with its famous sanctuary. I will add to this group the place called Sheikh Miskîn or Meskîn, whose name has not hitherto been explained. In my opinion it means simply "the leper sheîkh,"[4] that it is to say, Job.

This legend, adopted implicitly by the Arabs, and after them by the Crusaders, who believed in it as firmly as they did in the Gospel, seems to have really taken shape during the Byzantine

[1] Compare also the Δαναβά of the Palmyra region, mentioned by Ptolemy.

[2] Compare another place of the same name, on the west of and near Tell esh-Shihâb, *Ed-Dneibé*, also called Dneibet el-'Amrâwa (Schumacher, "Das Südliche Basan," p. 131), from the name of a neighbouring village, *'Amrâwa*, evidently to distinguish it from other places of the same name.

[3] Compare Clermont-Ganneau, "Études d'Arch. Orient.," vol. ii, p. 147 *et seq.* (On a Greek Inscription at Shaqrâ).

[4] The word *Meskîn*, *Masâkîn* in the plural, means in Arabic properly "unhappy," but in Syria it is used in common speech to mean the lepers: for example, *Beit el-Masâkîn*, "leper's dwelling." Probably this use of the word is ancient, and it is this which led the Crusaders to attribute to the old French words *mesel*, *mesiau* (*misellus*, diminutive of *miser*) the specific meaning of "leprous." From the Arabic word (with which compare the Hebrew and Aramaic מְסַכֵּן, מְסָכֵּין) is derived the Spanish *mezquino*, and, through it, the French *mesquin*, Italian *meschino*, &c.

period.[1] Without mentioning the Greek[2] inscriptions which tell us how at Bostra, a city where also the patriarch once dwelt, religious houses were established during Justinian's reign, and dedicated to St. Job, we see that at the epoch of the "Onomasticon," the legend, though still vague, was beginning to fix itself in the Haurân. In fact, both Eusebius and St. Jerome state that there was a tradition which declared Ashtaroth Carnaim or Carnea, a large village in Batanea,[3] to be Job's house.[4]

We should compare this passage with a very instructive gloss[5] on the same work, in which the uncertainty about the localities of the legend are clearly shown:—"According to the opinion of some, Ausitis (Uz) is Job's country; according to some, Job's country is Arabia; others say that Job's country is the land of Seôn (Sihon, king of the Amorites)." A little later the legend was definitely fixed. This we learn from an extremely interesting passage in the

[1] This tradition has possibly a more ancient origin. Josephus ("Antiquities," i, 6, 4) regards Ousos (= Uz), son of Aram, as the mythical founder of the Trachonitis and of Damascus. It is to be noted, on the other hand, that the name عيص, given by the Arabs to Esau or Edom, seems to be derived from עוץ.

[2] Waddington, *op. cit.* No. 1916A; another, copied by Ewing, Pal. Exp. Fund *Quarterly Statement*, 1895, p. 350, No. 175. In this latter I propose to read at the end, ἐτελιώθ(η) (ὁ) να(ὸς) τοῦ ἁγίου δικ(αί)ου Ἰώβ, "the shrine of St. Job the Just was finished." Δικαίου is here spelt δικεου; Job is officially designated *vir justus* in the Latin translation of the monthly calendar of saints of the Emperor Basil Porphyrogenitus. Compare δίκαιος in the LXX, Job i, 1.

[3] St. Jerome says, "in angulo Batanææ," *cf.* "Onomasticon," *s.v. Nineve* (= Nawâ); "in angulo Arabiæ," περὶ τὴν γωνίαν τῆς Ἀραβίας). This geographical term singularly reminds us of *Ez-záwiyeh esh-sharḳiyeh* (the eastern corner), which is the name given by the Arabs to the very region where the places of which we are treating are to be found. Compare the κώμη Γωνίας of the province of Arabia, in the lists of George of Cyprus (ed. Gelzer, No. 1,079).

[4] This is literally the tradition located at Nawâ by the Arab geographers (*cf.* Le Strange, *op. cit.* p. 516): "Nawâ . . . was the dwelling-place of Job," *cf.* in the Acts of the Council of 451 A.D. (Mansi, vii, 168): Ἰωβίου πόλεως Νέβης, "of Nebe (= Neve = Nawâ), the city of Job."

[5] "Onomasticon," ed. Larsow et Parthey, p. 224, note. The text has Ἀσίτις, which evidently ought to be corrected into Αὐσίτις, "the land of Uz," Job's country; *cf. op. cit. s.v.* Αὐς. The true reading is already in Reland; it has been properly reproduced by Lagarde (in his edition of the "Onomast. Sacrum," p. 266), who rightly connects the gloss in question with the *lemma* concerning Idum (after the words Γεβαληνὴ καλουμένη).

description of a pilgrimage attributed to St. Sylvia,[1] in which we see our Dannaba appear on the scene in an altogether unexpected manner. The pious pilgrim decides to go into what she calls, in so many words, the country of Ausitis, that she may there say her prayers at the tomb of Job, which had recently been discovered, and was attracting to it large congregations of the faithful. This new sanctuary was at Carneas, eight stages from Jerusalem. Job's town, says she, is at this day called Carneas; it was formerly called Dennaba, in the country of Ausitis, on the borders of Idumaea and Arabia. Subsequently she adds details, unfortunately incomplete owing to a lacuna in the MS., as to the discovery of the alleged tomb of Job by means of a revelation said to have been vouchsafed to a hermit; as to the great cavern in which they found a stone on which the actual image of Job was carved; as to the church built on this spot by a certain tribune and still unfinished, &c. One is much tempted to believe that this archæological monument, which was thus interpreted by popular belief, was no other than the famous Egyptian stele, bearing the name of Rameses II,[2] which is worshipped even to this day under tha name of Ṣakhrat Eyyûb, at Sheikh Sa'ad, not far from Nawâ, on the south side.

The topographical details contained in St. Sylvia's description of her pilgrimage, and the very terms she makes use of, remind one singularly of the information which I have gleaned from the "Onomasticon." Alone among them the appearance of Dennaba, which brings us back unexpectedly to the special subject of this essay, is surprising enough at first sight. It will seem less so if the reader will be good enough to refer to the article in the "Onomasticon" on Dannaba, "a town of Balak, the son of Beor, king of Edom, after whom Job reigned." St. Jerome conscientiously translates this "post quem regnavit Job"; but he immediately afterwards shows his surprise by adding, "licet mihi videatur longe

[1] Ed. Geyer, "Itinera Hierosol.," pp. 55 and 59.

[2] The unknown divinity before whom Rameses II stands in prayer on the stele must have been taken by the Arabs for Job's wife, who plays a considerable part in their legends, and whose name (*Ruhma*) they declare that they know. This would be an additional piece of evidence in favour of the female sex of this divinity, which it is very hard to make out at the present day owing to the dilapidated condition of the monument. See, on this point, my remarks (§ 12, No. 2) about the goddess Artemis, mentioned in an inscription at Tell el-'Ash'ari.

aliter" ("although I think very differently about it"). Evidently the person whom Eusebius took for Job was none other than Jobab (יובב), king of Edom, who did indeed succeed king Bela' (Balak). The mistake is an ancient one, for it reaches back if not to the time of the LXX version, at any rate to that of the long gloss which is there inserted at the end of the Book of Job,[1] on the authority of an old Syrian version: "He was originally named Jobab. . . . . The first (king of Edom) was Balak, the son of Beor; his city was called Dannaba . . . . after Balak reigned Jobab, who was called Job."

One sees at once how the name of Dennaba, from the city of Balak, the predecessor of the pretended Job, became introduced into the popular legend preserved in St. Sylvia's account of her pilgrimage, where it has actually finished by becoming confused with Ashteroth Carnaim, a place which, on the other hand, is closely connected by the "Onomasticon" with the memory of Job.[2] It is certain that the actual existence in this very district of an ancient *Danaba* (now Dh'neibeh) must have greatly assisted this localisation of the legend. I should not be surprised if they were to discover one day some Greek inscription proving the existence there also of a Christian worship of St. Job.

11. *Zeus-Helios and Baal-Bosor.*—At Sûf, about 6 kilomètres north-west of Jerash, Burckhardt[3] many years ago copied a Greek inscription which seemed as though it ought to be of some interest, but up to the present day no one has been able to make anything satisfactorily out of it[4] because of the imperfection of the copy.

Since then it has been revisited, newly copied, and has had a squeeze taken of it by Prof. Brünnow,[5] who gives the following

[1] Chap. xlii, 18: προϋπῆρχε δὲ αὐτῷ ὄνομα Ἰωβάβ. Πρῶτος Βαλὰκ ὁ τοῦ Βεὼρ, καὶ ὄνομα τῇ πόλει αὐτοῦ Δενναβὰ . . . μετὰ δὲ Βαλὰκ Ἰωβάβ ὁ καλούμενος Ἰώβ. As I shall show subsequently (§ 11, Zeus-Helios and Baal-Bosor) in this same passage, Job is already closely connected with the town of Bostra, whose name would be that of his own mother.

[2] It is well to note at the same time that Eusebius, too, expresses himself in a somewhat uncertain fashion upon this point: ἔνθα, ὡς ἐκ παραδοσέως, τοῦ Ἰὼβ τὸν οἶκον ἐπιδεικνύουσιν, "where, as though from tradition, they show Job's house."

[3] "Travels," p. 251.

[4] "C.I.G.," No. 4665.

[5] "Mitth. und Nachr. des Deutsch-Palästinaver.," 1898 p. 86, No. 10.

transcript of it in its rude state, without adding either explanation or commentary :—

ΑΓΑΘΗΙ ΤΥΧΗΙ
ΛΑΞΡΔΙΙΑΓΙΩΙΒΕΕΔΚΩΓΩΡΩΙ
ΚΑΙΗΛΙΩΙΑΜΕΓΑΘΟΓΔΗ
ΜΗΤΡΙΟΥΤΟΥΚΑΙΔΑΜΜΩ
ΛΟΓΔΗΜΗΤΡΙΟΥΜΓΕΛΕΥ
ΘΕΡΟΓΤΟΝ·ΒΩΜΟΝΑΝΕ
ΘΗΚΕΝΚΑΤΕΥΧΗΝ

Prof. Brünnow confines himself to the remarks that in line 2 M. Domaszewski inclines to read ΒΕΕΛΚΩΓΩΡΩΙ, and that in lines 5, 6, ΜΓΕΛΕΥΘΕΡΟΓ is an obvious mistake of the stone-cutter for *ἀπελεύθερος*.

This is how I propose to read and understand the whole inscription, by resorting to certain emendations, which I shall endeavour to justify. One of these is of importance.

Ἀγαθῇ τύχῃ.—(*Ἔτους*) *αξρ'*, *Διὶ ἁγίῳ Βεε(λβ)ωσώρῃ καὶ Ἡλίῳ, Ἀμε(λ)αθος Δημητρίου, τοῦ καὶ Δάμμω(ν)ος, Δημητρίου (ἀ)πελεύθερος, τὸν βωμὸν ἀνέθηκεν, κατ' εὐχήν.*

Good luck (lit. to the good fortune).—In the year 161, Amelathos the son of Demetrius, who is also called Dammon, the freed man of Demetrius, has dedicated this altar, in consequence of a vow, to Holy Zeus, Beelbôsôros and Helios.

The date, I imagine, is given according to the era of Pompey (63 B.C.), and corresponds to the year 98 A.D. This comparatively early date is confirmed by the palæography of the letters and also by the archaism of the orthography (the use of the iota ascript).

The reading *Ἀμέγαθος* may be allowed to stand, though this name has not hitherto been met with in the Græco-Syrian onomasticon; but, considering the admitted ignorance or carelessness of the stone-cutter, I am tempted to read *Ἀμέ(λ)αθος*, a recognised name among this Græco-Semitic population (*see* Waddington, Nos. 2393, 2416[1]); one might also read *Ἀμέ(ρ)αθος* on the strength of

[1] I may add to these a new example, taken from one of the inscriptions copied by Mr. Ewing, No. 14 (Pal. Exp. Fund *Quarterly Statement*, 1895, p. 47, at Umm el-'Osij), where I distinctly read, in the first line, *Ἀμέλαθος*, instead of the very improbable name *Ἀβδέλαθος*, proposed by Messrs. Wright and Souter. The original Nabatæan form of *Ἀμέλαθος* is חמלת.

Ἀμιράθου (Waddington, No. 2029), but this emendation is less satisfactory from various points of view.[1]

The reading ΔΑΜΜΩΛΟC cannot stand: the construction calls for a noun with the genitive case-ending, and this we can obtain by simply altering an Λ into an Ν, which is quite according to the rules of palæography. We have, therefore, a well-known proper name, Δάμων, with a slight variant, the reduplication of the μ, which is quite admissible in this Græco-Syrian dialect.

I now come to the most interesting point: the name of the deity to whom the altar is dedicated. It is a Zeus who appears at the same time to be connected with Helios. This mythological combination, which, by the way, is not unexampled,[2] answers exactly to that revealed to us by a very small fragment of an inscription discovered at Jerash itself,[3] on which we read . . . Διὸς Ἡλίου . . . We have to do here, then, with a Zeus-Helios, according to all probability a great solar deity of Semitic origin, whose character has caused him to receive this double equivalent in the Hellenic Pantheon. Our inscription at Sûf describes him with even greater precision, by inserting between his two specific names two words which will enable us to decide more certainly as to his nature and his origin.

The first of these is the epithet ἅγιος, "Holy," which, as I have already pointed out elsewhere,[4] is the characteristic title of Semitic deities when naturalised among the Greeks. Next comes the enigmatic group ΒΕΕΑΚΩCΩΡΩΙ, which evidently contains the knot of the whole matter. As M. Domaszewski very truly observed, the Δ should be turned into an Λ. We thus restore the first syllable Βεελ, which gives a good transcript of the divine name *Baal*. This vowel-scheme *Beel*, בְּעֵל, points, in my opinion, to a

[1] The vowel ε instead of ι; the nominative, which might as well be Ἀμιράθης as Ἀμίραθος. Nevertheless one might quote in favour of this second reading Burckhardt's copy, which has AMEPΛΘ□C.

[2] In the Haurân itself, *see* Waddington, Nos. 2392–2395, C.I.G., Nos. 4590, 4604.

[3] Schumacher, "Mitth. und Nachr. Deutschen Palæstinavereins," 1900, p. 55, who reasonably infers from it that the great temple at Gerasa must have been dedicated to Helios—it would be more accurate to say to *Zeus-Helios*; perhaps even, after what I am about to prove, to *Zeus-Helios Beelbósóros*.

[4] Clermont-Ganneau, "Études d'Archéologie Orientale," vol. i, p. 100, *et seq.*, and "Recueil d'Arch. Orient.," vol. iii, p. 330.

distinctly Aramaic form of the Phoenician בַּעַל. This ought not to cause us any surprise, considering the place and epoch of our inscription. This fact is confirmed by the form of the proper names derived from the god which we meet with in inscriptions from the more or less immediate neighbourhood: Βεελβάραχος = בעלברך, Βεελιάβος = בעליהב, &c.[1] This Aramaic form of the Phoenician *Beel* must not be confounded with the god *Bel*, בֵּל, Βῆλ, Βήλος, who appears in the avowedly Aramaic inscriptions at Palmyra.

This may be regarded as the first point gained.

But then what are we to make of the second element of the group: ΚΩCΩΡΩΙ, which, brought into the nomination case, implies an entire word of the form Βεελκώσωρος? The most natural idea is to seek for something which would differentiate our Beel or Baal, either an epithet, a substantive, or preferably the name of some place; at any rate, without any doubt we should look for some Semitic word transcribed into Greek and formed upon the root *κωσωρ*. According to the customary spelling of that epoch, the *κ* would imply a ק in the original form; on the other hand the *σ* may correspond to a sibilant letter of some sort, such as ס, צ, or שׁ. Even if we admit that, contrary to the general rule, the *κ* may here represent a כ, none of the combinations which one can imagine, formed out of these various letters, can supply us with a plausible word. One should especially guard against a specious combination which one might wish to make of them: a place-name such as קצר, קצור, justified by the Arabic قصر, قصور, *Ḳasr*, plur. *Ḳusûr*; it is sufficient, *à priori*, to reject this to remember that we are here dealing with the Latin word *castra*, which only found its way in late times into the Semitic languages.[2]

The solution of the difficulty which I propose is as follows:— The actual reading ΚΩCΩΡΩΙ is anything but certain. M. Brünnow's copy gives the Κ in a dotted form, which means that the outline of the letter is difficult to make out, both in the original and in the squeezes. This being so, when we remember, on the

[1] It is unnecessary to point out that it is by this same Aramaic influence that we must explain the cognate forms of the names of gods Βεελσάμης = *Baal Shamaim*, Βεελφεγώς, Βεελφεγώρ = Baalphegor, Βεελζεβούλ = *Baalzeboul*, &c.

[2] Compare the Talmudic word קצרה.

one hand, that the alphabet is an angular one (B, □), where the curved lines are replaced by straight ones; and, on the other hand, that what we should most naturally expect here would be a geographical name, I think that we ought simply to see a B in the doubtful K of the copy. Thus we obtain an excellent form from every point of view: Βεελβωσώρῳ, nominative Βεελβώσωρος= בעל-בצר, that is to say, "the Baal of the country or of the town of Bosor," which is quite analogous to the Semitic geographical vocables *Baal-Harran*, *Baal-Tarz* (Tarsus in Cilicia), *Baal-Lebanon* (Lebanon), *Baal-Sidon*, *Baal-Sor* (Tyre), *Baalat-Gebal* (the goddess of Byblus), and so on, of the Phoenician and Aramaic inscriptions, not to mention the Greek words in use in Syria, such as *Zeus Saphatenos* (the god of the Safâ); *Zeus Baitokaikeus* (the god of Baetocæce), &c.

The spelling Βωσώρ of the well-known Biblical place-name בצר, without regarding the various places to which it might apply, agrees well with the transcriptions in the LXX, in the first book of Maccabees, in Josephus, and in the "Onomasticon," all of which show us the vowel *o* as predominant: Βοσόρ, Βοσόρα, Βοσόῤῥα, Βοσσόρα and Βοσόρ,[1] Βοσώρ.

As for its geographical identification, we must apparently put aside the בצר and בצרה of Idumæa and of Moab, which are situated beyond the historical horizon of Gerasa. It would, on the other hand, be natural enough to think of the famous city of *Bostra* (בצרא). The absence of the ת in the transcription need not be any objection; this letter is no part of the original root, and it was not till after this epoch that it slipped in between the *s* and the *r*, to suit a phonetic law peculiar to Greek and Latin. Moreover, we have besides the current form of the ethnic Βοστρηνός, the pure and original form Βοσρηνός (Waddington, No. 2229[2]: Βοσρηνή). We must likewise bear in mind, from this point of view, the

[1] Two places which figure in the description of the campaign of Judas Maccabeus (1 Maccabees, v, 26, 28, 36; *cf.* Josephus "Ant. Jud.," xiii, 8, 3). Observe that this campaign had for its theatre this very country of Gilead to which the modern Sûf belongs. This is not the place to discuss the identifications which have been proposed for it either with Busr el-Harîri or with Bostra.

[2] We should add No. 2053B, in which Waddington has wrongly Βοσοηνῶν, following Wetzstein's copy, from which he infers the existence of an imaginary town of Βόσοα, which would be represented to-day by the village of Awwâs. M. Dussaud ("Voyage au Safâ," p. 183) has decided that the stone really bears the reading Βοσρηνῶν.

singular gloss[1] in the LXX version, which makes Job's mother a certain Βοσορρά, a fabulous personage, in whom popular tradition saw a true eponym of the city of Bostra, as is proved by a curious passage in the Acts of the Synod held at Bostra itself: Βόστρα, ἐπώνυμος οὖσα Βοσόρας τῆς μητρὸς τοῦ Θεσπεσίου Ἰώβ.[2] Be it said, by the way, that there probably is underlying this some mythological reminiscence of a goddess, the consort of the ancient deity worshipped at Bostra. We know from the Nabatæan inscriptions[3] that this city was the centre of the *cultus* of a mysterious deity, A'râ or A'dâ, who was regarded with special veneration by certain kings of the Nabatæan dynasty. This god, whoever he may have been, would certainly have had some right to bear the title of Beel-Bôsôr, "the Baal of Bostra," who figures in our Sûf inscription. However, it is as well to suspend our decision on this last point until we receive further information. There are other possible solutions of which we ought not to lose sight. For instance, our בעל-בצר may conceivably be some ancient local divinity of Edomite origin, whose worship may have been transplanted to more northern regions at some unknown epoch and in consequence of unknown circumstances.[4] Or again, by adopting the identification proposed by some writers of the Βοσὸρ of the Book of Maccabees with Busr el-Harîri, on the borders of the Lejâ, we may contend that it is the name of this town which underlies our topographic word,[5] in which case we should have to admit that the true form of our word should be בעל-בשר or בעל-בסר, the name of *Busr* being spelt بسر, and not بصر, by the ancient Arab

[1] Chap. xlii, 17, ἦν δὲ αὐτὸς . . . μητρὸς δὲ Βοσόῤῥας.

[2] Mansi, "Conciles," i, p. 787; compare Waddington's notes on No. 1916A.

[3] "Corpus Inscr. Semit.," ii, No. 182, and "Répert. d'épigr. Sém.," No. 83 (compare "Recueil d'Arch. Orient.," iv, pp. 170 and 179).

[4] Moreover, it is not impossible that the city of Bostra, in the Haurân, may itself be of ancient Edomite foundation. These transfers of names by means of conquest or of colonisation are not uncommon in all periods of history.

[5] In support of this conjecture it might be urged that this *Busr* possesses a sanctuary (Meshhed) much venerated at this day by the Arabs, and dedicated to the prophet El-Yousa' (Joshua ?), *see* Le Strange, "Palestine under the Moslems," p. 425. May not this Yusa' be rather the more or less direct descendant of the enigmatical deity ישעאלקום, who has recently made his appearance in the Nabatæan pantheon? (*See* "Recueil d'Arch. Orient.," iv, p. 176).

geographers. But these are hypotheses which seem very adventurous when we have ready to hand the important city of Bostra, which agrees so well with most of the main conditions of the problem.

12. *On Some Greek Inscriptions in the Haurân.*—Professor George Adam Smith, at the same time that he made his magnificent discovery of a fragment of a stele of Pharaoh Seti I at Tell esh-Shihâb, made also in the same region of the Haurân some other discoveries of much interest to students of Greek epigraphy.[1]

The texts of this latter category published by him have appeared to me capable of emendations and restorations at certain points. These new readings, which originally occurred to me when studying the facsimiles engraved in his description, have been confirmed since then by the examination of the original transcripts and of the photographs which the author has been good enough to send to me, for which courtesy I gladly take this opportunity of thanking him.

(1) *A Fragment Built into a Wall at Tell el-'Ash'ari* (pp. 353–358). —The inscription is unquestionably in the name of the Roman Emperor Titus; there cannot be any doubt on this point, seeing that one can still very clearly make out at the end of the first line the remains of the letters ⊏Π/, belonging to the gentilic [Οὐε]σπ(α)[σιανός], which Titus bore as well as his father. The god to whom the dedication is addressed is not Apollo, but Ζεὺς μέγιστος, *Jupiter Maximus*, whose worship was very common throughout Syria. This is how I propose to restore and to read the entire inscription, which is of real historical value :—

1. [ὑπὲρ τῆς αὐτοκράτορ]ος Τίτου Φλαυυί[ου Οὐε](σ)π(α)-
2. -[σιανοῦ σεβαστοῦ σω](τ)ηρίας, Ἀπολλ(οφά)ν[ης Δι-]
3. -[ογένους, πατὴρ πόλε]ως, Διὶ μεγίστῳ, [ε]ὐ[σεβε-]
4. -[ίας χάριν, ἐκ τῶν ἰδί]ων (τὸν βωμ)[ὸν ἀνέστησεν][2]

For the health of the Emperor Titus Flavius Vespasianus Augustus, Apollophanes, the son of Diogenes, the father of the city, has set up this altar at his own expense, out of piety to Jupiter Most High.

My restorations may at first sight appear daring, not to say arbitrary; they seem to me, however, to be absolutely corroborated[3]

[1] Pal. Exp. Fund *Quarterly Statement*, 1901, October, pp. 340 *et seq.*

[2] Or, of course, ἀνέθηκεν, ἐποίησεν, ἀνήγειρεν, &c.

[3] While I think that I have accurately settled the extent and the tenor of

by an inscription, closely connected with this one, which was discovered some 12 years ago by Professor G. Adam Smith himself [1] at a place close by, Tafas (a little more than three miles to the east of Tell el-'Ash'ari), and recopied some years later, under more favourable conditions, by M. Fossey.[2] I read it somewhat differently to the way in which Messrs. A. Smith, Ramsay, and Fossey, respectively, have done :—

1. (Ἔτους) βλρ', ὑπὲρ τῆς αὐτοκρά[τορος σεβα]-
2. στοῦ Μάρκου Ὀθωνος σωτη[ρίας, Ἀπολ]
3. -λοφ[άν]ης Διογένους, πατὴρ π[όλεως, τὴν]
4. στοὰν σὺν [τ]αῖς δυσὶ ψαλίσι οἰκ[οδόμησεν]
5. ἐκ [τῶν ἰδίων, εὐσε]β(ε)ίας χάριν, τ . . . . .

In the year 132, for the health of the Emperor Augustus Marcus Otho ; Apollophanes, the son of Diogenes, father of the city, built at his own expense this portico with its two arcades, out of piety, dedicated to . . . . (name of the deity ?).

The year 132 of the era of Pompey corresponds to the year 69 A.D., the very year in which the ephemeral reign of the Emperor Otho took place. It is, we see, the same personage that must have made these two dedications, at an interval of a dozen years at the most (Titus reigned from 79 to 81 A.D.). The two places, Tell el-'Ash'ari and Tafas, may be regarded as practically forming part of the same territory, and it is quite natural that our Apollophanes, after having built an edifice in the one, should have set up an altar in the other.[3] The termination ως, preserved by the new inscription, brilliantly confirms the happy restoration πατὴρ πόλεως, which we owe to Professor Ramsay in the first one. I may add that this title, although rare in Syria, seems to have remained in use up to the Byzantine epoch, as is proved by an inscription at Cæsarea [4] Maritima.

the missing parts of the inscription, I do not absolutely guarantee the arrangement of the lines. One might have expected that at the beginning there would be a double date, as in the inscription with which I compare this one, but the obvious length of the lines precludes this supposition.

[1] "Critical Review" (Edinburgh), 1892, p. 59.

[2] "Bulletin de Correspondance Hellénique," 1897, p. 47, No. 29.

[3] We may also admit the possibility, considering the short distance between the two places, of one of the two stones having been subsequently displaced by the Arabs, and of their both having originally been on the same spot.

[4] "Rev. Bibl.," 1895, pp. 73, 240, 378 ; "Byzantin. Zeitschrift," 1895, p. 160 ; Pal. Exp. Fund *Quarterly Statement*, 1896, p. 87.

(2) *Altar at Tell el-'Ash'ari* (pp. 354-356).—My reading differs from that of Professor Adam Smith in several points, the most important of which is the name of the deity :—

1. Ὑπὲρ σωτηρίας καὶ διαμονῆς
2. Τίτου Αἰλίου Ἀδριανοῦ
3. Ἀντωνείνου, σεβαστοῦ, εὐσε-
4. βοῦς, καὶ τοῦ σύνπαντος αὐ-
5. τοῦ οἴκου,
6. Πάμφιλος Ἐρ[εν]νίου,
7. βουλ(ε)υτὴς, Ἀρτέμιδι τῇ
8. κυρίᾳ[1] τὸν βωμὸν, ἐκ τῶν
9. ἰδίων, κατ' εὐ[χ]ὴν, ἀνήγει-
-ρεν

For the health and continuance of Titus Aelius Hadrianus Antonius Augustus Pius, and of all his family; Pamphilus, the son of Herennius, Senator, has set up this altar at his own expense, and to fulfil a vow, to Artemis our Lady.

Line 7 changes its complexion altogether in consequence of the new reading which I propose, and which, being verified by reference to the photograph, may be regarded as certain. The existence of the Syrian worship of Artemis has already been proved[2] by the inscriptions at Jerash[3]; this same goddess, moreover, appears as Tyché, protectress of the city, on the coins of the Gerasenians. I think it unnecessary to enlarge upon the peculiar importance attaching to the appearance of this goddess, the equivalent, perhaps, of some ancient Semitic or lunar deity, at Tell el-'Ash'ari—that is to say, at a place which, even if it does not represent the famous 'Ashteroth Karnaim, cannot in any case be far from it. Everyone knows how keenly this topographical question is still being discussed; Professor Adam Smith has reopened the debate without being able to decide it. We must for the future, in working out the problem, take into account this new factor which I have introduced into it. Its full importance will be understood if the reader will call to mind that mysterious non-Egyptian divinity, seen full-faced and crowned with an enormous lunar crescent, to which Rameses II is paying his devotions, on the stele of the

[1] As for the order of the words of this formula, compare Ἀθηνᾷ τῇ κυρίᾳ. Waddington, Nos. 5, 2203a, and 2453.

[2] Not to mention an inscription at Daphne, Waddington, No. 2713a.

[3] "Revue Bibl.," iv, p. 324, No. 25, and viii, p. 9, No. 5, p. 11, No. 9.

Ṣakhrat Eyyûb, which was discovered at a distance of only seven and a half miles to the north of Tell el-'Ash'ari. Have we not here the Canaanitish prototype of the lunar divinity who, dominating as she did the entire district, and having perhaps given her so suggestive name as the "Two-Horned Astarte" to 'Ashteroth Ḳarnaim, was transformed into Artemis during the Hellenistic and Roman epoch, and has now revealed herself by name at Tell el-'Ash'ari? It might be worth while also to inquire whether the sacred *temenos* of Ḳarnaim,[1] which the Second Book of Maccabees calls the Ἀτεργάτιον,[2] was not perhaps really an Ἀσταρτεῖον, or indeed an Ἀρτεμίσιον.

(3) *Inscription at Sheikh Miskîn* (p. 361).—This is an epitaph which affects a metrical style. Both its transcription and its reading require correction[3] thus :—

Οὐ μέχρι στρατιᾶ[ς ἀφέ]σεως[4] ἀπέ-
-ν(ε)ιμεν Οὐλπιανῷ τὸ γέρας ὁ βασ⟨ε⟩ι-
-λε(ὺ)ς· ἀλλὰ τὸ θαυμαστὸν ὅτι οὐδὲ λ-
-όγος ἡ θ(ε)ία χάρις, ἀλλὰ γράμμα Τω(?)

The sovereign has given Ulpianus his reward (the *honesta missio*) before (?) he had completed his term of military service; only, the surprising thing is that the divine grace is not a *logos*, but . . . . (?).

The meaning is obscure, especially the conclusion, which is hidden under the antithesis of λόγος and γράμμα or γράμματα. Its obscurity is all the greater because one really does not know what to make of the two last letters τω of the inscription. It is complete and in perfect preservation, and there is nothing to justify us in reading γραμμάτω(ν), which, moreover, would not construe properly according to the rules of syntax. I do not venture to suggest γράμματ᾽ω.[5] It may be that the whole thing has a double meaning, the *basileus* may mean the King of heaven as well as the Emperor; human life was often likened to a military service, which God brings to an end whenever he pleases, and the

[1] Josephus, "Ant. Jud.," xii, 8, 4; 1 Maccabees, v, 44.

[2] 2 Maccabees, xii, 26.

[3] My emendations, made at first sight, without the help of the photograph, are confirmed by the copy of this text taken by M. Fossey, *op. cit.*, p. 51, No. 45.

[4] M. Fossey has conjectured ἀπολύσεως, which has the same meaning; but the word is far too long for the size of the *lacuna*.

[5] Still less γράμμα τῶ (= ταὐ = τ[ελευτή]).

epithet θεῖος ("divine") was at the Byzantine epoch the adjective officially applied to imperial ordinances.[1]

The study of these Greek inscriptions has led me to examine some others previously collected by Professor G. Adam Smith in the course of his first excursion to the Haurân and the country of Gilead, and published by him in the "Edinburgh Critical Review" (1892, pp. 55 *et seq.*). I shall add a few brief observations about them.

—*Sanamein*, Fig. 1.—See new copies by Ewing, *l.c.*, p. 59, No. 47B; and by Brünnow, "Mitth. und Nachr. des D. Pal. Ver.," 1896, p. 21.

—*Ib.*, Fig. 2.—It had already been copied by Constantine Macrides, and published by Mordtmann, "Mitth. und Nachr. des D. Pal. Ver.," 1884, p. 121 (with an excellent commentary on the double date of the reign of Agrippa II).

—*Inkhil*, Fig. 3 = Macrides–Mordtmann, *l.c.*, p. 124.

—*Sheîkh Miskîn*, Fig. 5 and Fig. 6.—The two fragments are parts of one single inscription which has already been copied by Macrides, *l.c.*, p. 123, No. 2. Mordtmann's reading of it leaves much to be desired; the second part, especially, has been altogether too much for him. Professor A. Smith has confined himself to translating the first lines. I propose, taking the two copies together, to read the entire inscription as follows:—

'Ασίαμος[2](?) [Ἀυ]θου, [ἐκ] τῶν ἰδίων καμάτων καὶ
τῶν αὐτοῦ τέκνων, τὸ μνημ(ε)ῖον ἐποίησ[εν], καὶ
λέγ(ε)ι· Χαῖρε, π(α)ρ(ο)[δί]τα! ὥσπερ εἶ ἤμην, (κ)α[ὶ]
ὥσπερ εἰμ(ὶ) (ἔ)ση[3]· ὁ βίος γὰρ καὶ τὰ χρήματα
οἴκος οὗτός ἐστιν.

Asiamos (Aslamos ?), the son of Authos, made this sepulchre by his own labour and that of his children, and he says: "Hail, passer by! As thou art, I was; and as I am, thou shalt be! for life and riches (all end in) this house of the tomb."

[1] Compare Waddington's comment on No. 1906A, line 3.

[2] A very doubtful name, of an improbable form: perhaps we ought to emend it into Ἀσλαμος, a well-known Græco-Hauranian proper name.

[3] This word and the preceding one are represented by the group of letters ΕΙΜΕΙCΙ in Macrides's copy, and by the group ΕΙΜΕCΙ in Adam Smith's copy.

It is the equivalent of the well-known sentence *quod ex fui, quod sum eris*. The final thought is expressed in a yet more energetic fashion in the brief and melancholy epitaph on a tomb at Irbid, which I published long ago,[1] μετὰ πάντα τάφος! "at the end of all comes the tomb"!

—*Tafas*, Fig. 7 and Fig. 9.—See new copies by M. Fossey, *l.c.*, p. 46, Nos. 26 and 27.

—*Fîk*, Fig. 12 (compare Schumacher, "The Jaulân," p. 141, Fig. 45).—The first words of the Hebrew inscription seem as if they might read אנה יהודה, "I Jehoudah."

I shall end this little epigraphic review by an emendation of some importance concerning a great metrical epitaph copied at *'Akraba*, near Ṣanamein (Haurân), by Mr. Ewing, and explained by Messrs. A. G. Wright and A. Souter (Pal. Exp. Fund *Quarterly Statement*, 1895, p. 53, No. 31).

I shall not stop to discuss certain points of detail, for instance, the very suspicious place name which appears as Βα[χ]εσεθῆς.[2] I only wish to deal with the two last lines, which these gentlemen have transcribed and translated as follows[3]:—

Παυλίνη δ'οὔνομα Κληιγαμίδαο γενέθλης
Κύλπτου δὲ Νάμωνος ἀειζώοισ(ι)μετείη.

Paulina was her name, and she was of the race of Cleïgamidas.
May Cylptus, son of Naamôn, be among those who live for ever.

The first phrase is not constructed on grammatical principles; the proper names Cleïgamidas and Cylptus are such as one is not likely to find in either the Hellenic or the Semitic onomasticons. If we examine the copy with care, we shall see that the words ought to be read and interpreted in an entirely different manner:—

Παυλίνη(ς) δ'οὔνομα, κα(ὶ Ἡ)ρα(κλ)ίδαο γενεθλῆς,
Κυ(δίσ)του τὲ Νάμωνος ἀεὶ ζωοῖσ(ι) μετείη.[4]

May the names of Paulina, of Heraclidas her son, and of the illustrious Namôn, be always among the living.

[1] "Recueil d'Arch. Orient.," vol. i, p 17, No. 26.

[2] In the genitive case; one might at a pinch read Νασιγεθης, and find it in the ancient name of Kefr Nâsij, which is situated quite close to 'Akraba, to the north-east.

[3] The deceased Namôn or Naamôn has just stated in the preceding verse that he built his sepulchre with the assistance of his wife and his son.

[4] A reminiscence of Homer, ὄφρα ζωοῖσι μετέω. Compare Waddington, No. 2434, ἀεὶ ζωοῖσιν ἐνείη, from another metrical epitaph.

This emendation seems to me to be established beyond all question by another inscription copied some time ago by Wetzstein (Waddington, No. 2413d) at 'Akraba itself, which runs thus :—

Ναάμων ἤρξατο, Ἡρακλίδας ἐτελίωσεν

Naamon began (this building), Heraclidas finished (it).

There can be no doubt that we have here the same personages, father and son, and that the inscription alludes to one of the buildings, not a funerary one, which our Naamôn was pleased to set up during his lifetime, as he boasts that he did in the inscription copied by Ewing :—

ἐειμάμενος δὲ ζωοῖσι τὰ οἱ φίλος ἤθελε θυμός

We gather from another inscription at 'Akrabâ (Waddington, No. 2413c) that Hercules was the object of a special *cultus* in that town, which is a rare thing in Syria. This fact may perhaps explain the choice of the name of Heraclidas given to Naamôn's son.

I may observe in this connection that a good many of the inscriptions copied by Mr. Ewing and published in the *Quarterly Statement* stand in need of a careful revision. I shall, I hope, have an opportunity of returning to this subject.

FURTHER NOTES ON THE INSCRIPTIONS FOUND AT TELL EL-'ASH'ARI.

By Professor George Adam Smith, D.D., LL.D.

M. Clermont-Ganneau's reading **ΑΡΤΕΜΙΔΙΤΗ** for the latter half of the seventh line of the altar inscription, which I found last summer at Tell el-'Ash'ari, is undoubtedly correct, as a re-examination of the original photograph proves. I had conjectured (*Quarterly Statement*, 1901, p. 356) that the letters in question contained the name of the town or of its goddess. That M. Clermont-Ganneau has discovered the name to be Artemis is a fact of great importance on the controversy as to the site of 'Ashteroth Ḳarnaim.

In my paper of last October (pp. 358 *f*) I argued that there was not sufficient evidence for identifying Tell el-'Ash'ari with either of the Ashtaroths of Eusebius, one of which was in all

probability the 'Ashteroth Ḳarnaim of the Old Testament, and the Karnion of the Second Book of Maccabees. How does the discovery that 'Artemis was worshipped at Tell el-'Ash'ari affect the question?

In the first place, we have to consider whether we can take 'Artemis as the equivalent of 'Ashtoreth (Heb.) or 'Astart (Phoenician). The proper Greek equivalent of the latter was Aphrodite. The star of both was the planet Venus, and both were goddesses at once of war, the destructive, and of love, the generative force. But, on the other hand, 'Ashtoreth had many manifestations; and this plurality is perhaps expressed in the Hebrew title of her city 'Ashteroth (plural-construct) Ḳarnaim. Among the Phoenicians 'Astart was the female counterpart of Baal, the sun-god; and Baudissin (in the second edition of Herzog's "Real-Encyclopädie," i, p. 722) gives good grounds for supposing that the Babylonian Ishtar, which is the same name as 'Astart, had originally lunar characteristics. Besides, according to the often-quoted testimony of Lucian ("De Dea Syria," 4), and of Herodian (v, 6, 10), the Syrian goddess was regarded as a moon-goddess and figured with a head-dress, like that of Isis, consisting of a disc between a pair of horns.

According to 2 Macc. xii, 26, there was at Karnion, or Ḳarnaim, an *Ἀτεργάτιον*, or temple of the deity Atargatis; עתרעתה. This name is a compound of עתתר = עתתר, the Aramean form of 'Astart or Ishtar, and עתה or עתי, the name of another deity, found in the theophorous names of some Palmyrene citizens. To many writers of the Greek period Atargatis (*see* the proofs in Baudissin's article) was *the* Syrian goddess; and as her sanctuary was at Hierapolis, there is no doubt that it is she and not Astarté whom Lucian describes. In § 32 of his treatise he says she shares the character of many Greek goddesses—Athene, Aphrodite, *Selene*, *Artemis*, &c. But, of course, Atargatis was merely a variation of 'Astart, one of the many manifestations expressed by the Hebrews in their plural name 'Ashtaroth. Professor Cheyne's statement, that 'Ashtaroth and Atargatis were different deities (article "Atargatis" in the "Encyclopædia Biblica"), requires, therefore, some qualification, and M. Clermont-Ganneau's supposition that the *Ἀτεργάτιον* at Karnion was really an *Ἀσταρτειον* is justified.

All this makes it extremely probable that one of the 'Ashtaroth, or manifestations of 'Astart, was intended by the name Artemis on the Tell el-'Ash'ari altar.

This conclusion, however, hardly leads us nearer an identification of Tell el-'Ash'ari with 'Ashteroth Ḳarnaim. For this, as I have observed, there is no other evidence, and, by itself, this is not enough. On whatever site in this region 'Ashteroth Ḳarnaim may have lain, the worship of the goddess may easily have extended to the neighbouring towns as well; and Tell el-'Ash'ari may only be one of such subsidiary sanctuaries. That it was the Karnion in which the Ἀτεργάτιον lay, is, as I have said, hardly possible in face of the fact that, while Karnion was difficult to approach, διὰ τὴν πάντων τῶν τόπων στενότητα (2 Macc. xii, 21), Tell el-'Ash'ari lies on two sides open to the plain.

The identification by M. Clermont-Ganneau of the writer of the other inscription which I found at Tell el-'Ash'ari with the writer of the inscription in honour of Otho, which I discovered in Taffas in 1891, and recorded in the "Critical Review" for January, 1892, is extremely interesting. M. Clermont-Ganneau is right in saying that the two places "may be regarded as practically forming part of the same territory." For to-day Tell el-'Ash'ari is held, and its fields are cultivated by, inhabitants of Taffas.

Professor W. Ramsay, of Aberdeen, has reached independently the conclusion that the inscription is to Zeus, not Apollo, and that the letters indicating the latter name are part of a personal human name.

THE VIRGIN'S FOUNT.

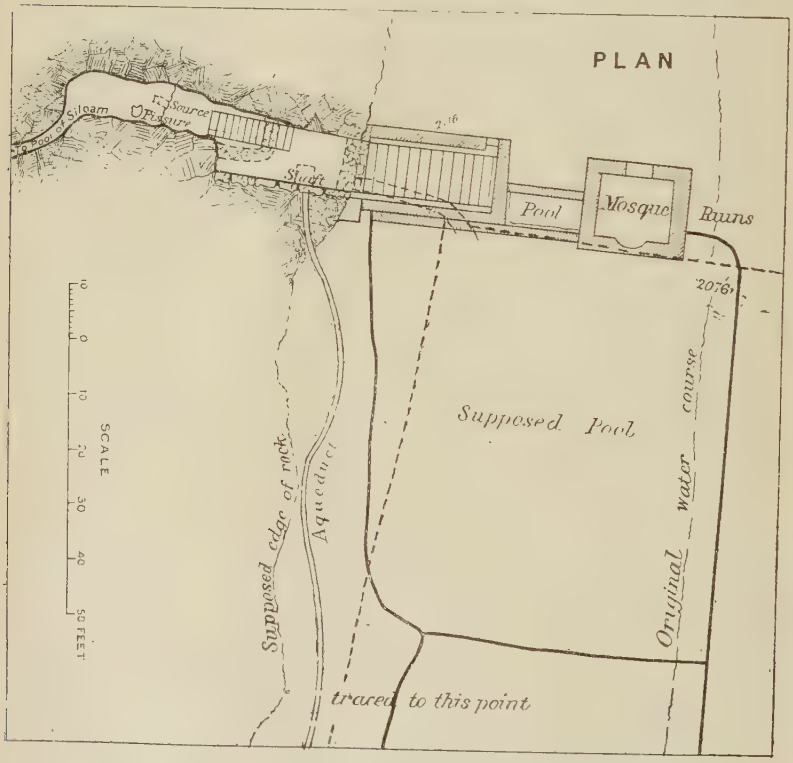
By Dr. Schick.

As the rain during the winter of 1900–1901 was not sufficient to fill the cisterns, there is now (in the summer of 1901) a scarcity of water in Jerusalem. Also the periodical flow of water from the Virgin's Fount is much less copious than usual, and very little water comes down through the aqueduct to its outlet at the pool of Siloam. The municipality sent people to look into the matter and make a report. The advice given was to clear out the basin at the Virgin's Fount by removing the large deposit of stones and earth which had accumulated during the course of centuries.

Yusuf Pasha, who is now here and interests himself in such matters, called one day and asked me to go down with him to the

Virgin's Fount ('Ain Umm ed-Deraj). I went with him and saw several things of which I now send a report. In illustration of my report I have prepared plans and a section[1] based upon the Ordnance Survey, Sir C. Warren's drawing (Plate XLIII), to accompany the Jerusalem "Memoir," and my own observations.

Having dismounted from our donkeys, we descended the first flight of steps to the landing. The vault here is about 9 feet wide,

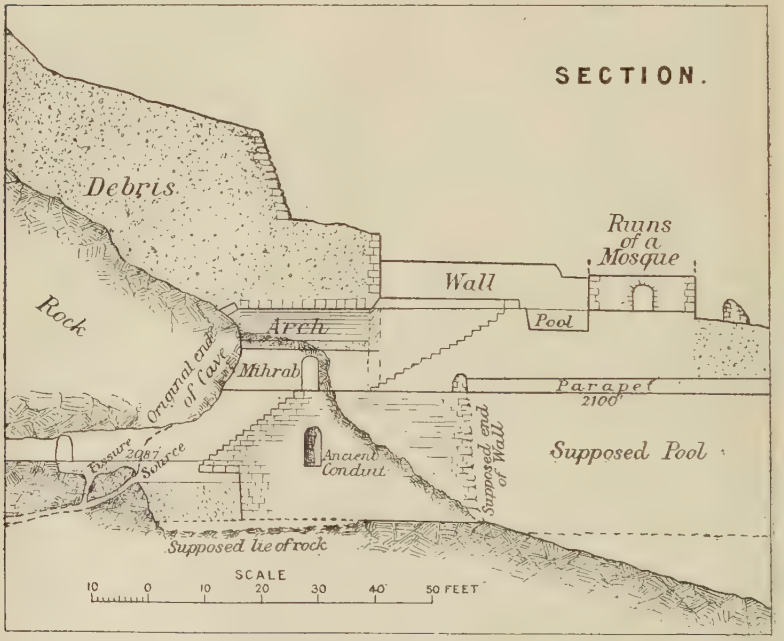


or nearly the breadth of the upper stair. The second, or lower, staircase commences in the middle of the landing, and is only 4 feet wide. It is on the northern side of the landing, which, to the south of it, has a breadth of 5 feet. Chairs were brought, and we sat down until our eyes had become accustomed to the darkness and we had heard what the people had to tell us. They said water

[1] The plans and section are preserved in the office. Only those portions which include the Virgin's Fount are published here.

had come that morning, and would probably come again about noon; but the flow was so small that the water did not reach the lowest step, and none passed into the aqueduct. When the flow ceased the water gradually fell until it reached the level we saw—about 2 feet below the lowest step. It seemed as if it ran off through some unknown channel or fissure. We then went down the lower steps, and had a plank placed across the basin from the steps to the entrance to the Siloam aqueduct so as to be able to examine everything. There is a sort of fissure in the rock which, before the basin was cleared, was unknown. There was some water standing in it, and the workmen said that water issued from it. But the real opening in the rock from which the water gushes out is more to the east (nearer the stairs), in the vertical face of the rock, which is there cut down rather steeply (*see* section). The opening is less than a foot wide, of oval form, rough, and evidently natural. Its bottom falls rapidly westward, and it was, when we saw it, full of water. The workmen intended to blast this rock with gunpowder, but I advised Yusuf Pasha not to allow them to do so, as it would greatly injure the place. A sort of pool or reservoir, about 7 feet wide, and 30 feet long, extends eastwards from the mouth of the Siloam aqueduct, and its eastern end, for a distance of 7 feet, lies beneath the lower staircase. The northern side is clearly rock; I could not make out whether the east end was rock or masonry coated with cement. The pool was more than half cleared, but the bottom was still covered with mud. We therefore deemed it necessary that the pool should be completely cleared out, and the sides and bottom examined for any aqueduct or fissure by which the water could escape. This was done, and the southern side of the pool was found to be *rudden*, that is a filling up with all sorts of stones without order like a tumbled-down wall, and not rock. Through this *rudden* the water ran away. They then built a wall there, and filled up the pool again, completely beneath the steps, and outside them to a level 3 feet below the tread of the lowest step. This new bottom for the pool was paved and cemented as far as the mouth of the Siloam aqueduct, and the water flowed down again to the pool of Siloam. The water now stood as high as the second step from the bottom, and the basin was too shallow for people to drown whilst bathing. This lasted only a week, for the wall and other work done by the *fellahîn* was bad, and the water ran away and was lost as before.

The overseer of the work had heard me tell Yusuf Pasha, as we were sitting together, that if a shaft was sunk beneath our chairs the second aqueduct, of which I excavated the lower part some years ago (*Quarterly Statement*, 1891, p. 13), would probably be found. Upon this he sunk a shaft, and at a depth of 6½ feet found a rock-hewn aqueduct running south. Its lower part was full of mud and water, but it was examined for some distance by Dr. Masterman and Mr. C. Hornstein. From their description[1] it



appears to be built in the same way as the portion I discovered. The course of the aqueduct is shown on the plans, and its level and height on the section. It is just under the *mihrab* in the porch, and the level of its bottom is slightly lower than that of the celebrated Siloam tunnel. It was clear that the water found its way through the *rudden* to this old aqueduct, so a substantial wall was built under the lower steps, and the basin was filled up with good masonry to the desired level. All was then properly paved

[1] *See* p. 35.

and cemented, and the water has since kept up to the level of the second step from the bottom, and now runs through the aqueduct to the pool of Siloam.

It has hitherto been supposed that the source of the spring was beneath the lowest step, as reported by Robinson and others; but it is now clear that the water, when it gushes forth from the true mouth, strikes the east end of the basin with some force, and, being deflected westwards, appears to run from beneath the lowest step. Others have said that the water rose from the bottom of the basin, and this is in a sense true, for when the basin is filled with rubbish to a level higher than that of the true mouth the water has to force its way upwards through the deposits. There is also the fissure to the west, but from this, when filled with earth, little water can issue.

The Buildings.—Over the eastern portion of this little pool there is no vaulting, but covering stones, more than 5 feet long, are laid across, and above these the lower staircase is built. The first stone is really the lowest step. On the north side the rock is visible about 20 feet higher up, so I think that towards the east, on that side, the rock formed a cliff some 30 feet high. From a fissure in this cliff the waters of Gihon may have poured forth originally. The south side of the porch is masonry, and in this there is a *mihrab* built by the Moslems. Behind the facing stones is the rock upon which the arch constructed over this place rests. As the crown of the arch is not in the centre of the porch, but about a foot to the south, it is clear that the south end of the arch must rest on the rock behind the masonry which seems to have been built only to obtain a *mihrab*. This arch, of which the crown is 15 feet above the landing, is usually held to be modern. This is certainly wrong, for the string course visible on the north side is covered with ancient incised writing, in small letters, which are so worn by age and purposely defaced with tools that nothing can be made of them. Possibly the writing may be preserved behind the masonry on the south side. The arch is also of two different dates, half of it having been destroyed and rebuilt. Thus the eastern half, though some of it looks old, is of later date than the western. The upper staircase was built long after the lower one, but the date of its construction cannot be fixed with certainty. The rise of the steps is the same in both staircases (10 inches); but the tread is 14 inches in the lower and 20 inches in the upper staircase. The number of steps in the lower is 14, and in the upper 16. On the

highest step of the upper staircase a stone slab of some height has been set up, so that visitors have now to enter at the northern corner.

Probable History of the Spring.—There appears originally to have been an overhanging cliff, some 30 feet high, with a large fissure from which the water gushed forth and then ran down the Kidron Valley as a "brook." It was soon found necessary to store water for daily and future use, and a small pool was made. In the times of David and Solomon a larger pool was constructed, which was called the "King's Pool." The position of this pool is not known, but it probably occupied the width of the valley, leaving only space for a road on each side. Next a covered conduit was made on the west side of the pool, to convey the water to another pool (Neh. iii, 15) situated in the Tyropœon Valley and so inside the town. This conduit, sometimes called the "second" aqueduct, is that which I discovered, and of which I excavated the lower portion for a length of 600 feet. During the work at the spring, 200 feet of the upper portion was found. Above the conduit a paved road was made for nearly the whole length. Thus matters remained until Hezekiah "stopped" the spring and made the famous aqueduct to convey the water direct to Siloam, and deny its use to an enemy besieging Jerusalem. The earlier aqueduct then fell into disuse and was neglected.[1] "Stopping" the spring was an easy matter, but making the tunnel through the Ophel hill required a long time. The cave or fissure from which the water issued was enlarged towards the west, and the shaft and ascending passage leading to the city on Ophel, which were discovered by Sir C. Warren, were made at the same time as the tunnel. If the chamber into which the ascending passage led was in the city, as seems probable, then the city wall did not stand on the edge of the higher part of the Ophel Hill, as Dr. Guthe, who is followed by Dr. Bliss, thought he had discovered, but lower down, on the brow of the hill, as shown in Section III.[2] Even there it would be 88 feet above the bed of the valley. We learn from Nehemiah iii, 17–26, that the wall at this point was double, so the main wall probably stood on the edge of the hill, and the other, some distance lower down, was an outwork. When, after the destruction of the city by the Romans, this portion of it was left desolate, the waterworks beneath were no longer used, and fell into decay.

[1] The aqueduct appears to have been used for irrigation purposes during the early Arab period.—Ed.

[2] This part of the section is not published.

Ancient City Sewer.—Sir C. Warren mentions ("Recovery of Jerusalem," p. 255) an underground channel, referred to by Dr. Barclay in his "City of the Great King" in a manner which implies that it was in some way connected with the Virgin's Fount. It is near that spring, and appears to the west of it on Plan I; the level of its exit is shown on the section.[1] About 40 years ago I entered this rock-hewn channel with a few assistants, and found it quite dry. We followed it in a north-west direction for 400 feet, when a broken covering slab stopped further progress. A few years later I noticed that the main sewer of the city had an outlet about 250 feet south of the Dung Gate, and that the fluid, after running eastward on the surface of the ground, fell into an opening near the road going down to the Siloam Pool, and then, continuing underground, came to the surface again at the exit mentioned above. Thence the fluid ran down the steep eastern slope of Ophel to the gardens in the Kidron Valley. This state of things lasted a few years, when a change was made and the fluid was carried down the Tyropœon Valley to the *Birket Hamra*, below the well-known small pool of Siloam. This sewer[2] is certainly old, and in ancient times it probably crossed the Kidron Valley in a diagonal line, below the "King's Pool," and, running southward, passed to the east of Bîr Eyyûb.

THE RECENTLY-DISCOVERED AQUEDUCT FROM THE VIRGIN'S FOUNTAIN.

From a Paper by Dr. MASTERMAN.

THE work in the basin of the Virgin's Fount, described by Dr. Schick (p. 29), was carried out by the *fellahîn* of Silwan; and the overseer he mentions was Juma'a, one of Dr. Bliss's most trusted and skilled workmen. Juma'a, acting upon what he had heard Dr. Schick say to Yusuf Pasha, commenced digging on September 9th, and came upon the aqueduct.

On September 14th Mr. Hornstein, who is in close touch with the *fellahîn* of Siloam, brought Juma'a and some of his assistants

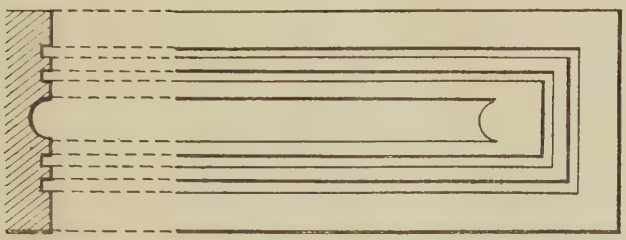
[1] Not published.

[2] This is probably part of the ancient sewer of the City of David, on the eastern hill. It could not well have served as the sewer of the western hill before the Tyropœon Valley was filled with rubbish.—ED.

to me to ask whether I could lend them some of the Palestine Exploration Fund planks for supporting the sides of the excavation. As the property of the Fund had been left in my charge by Dr. Bliss, I felt that I might safely lend the planks for a purpose so entirely in accordance with the work of the Fund. But in addition to this, I felt that the opportunity of seeing this new discovery was too good to be lost. Mr. Hornstein and I accordingly decided to visit the excavations in the afternoon. We found the work arranged in a most business-like way -like one of Dr. Bliss's own shafts—and we were lowered down in the same way that we had often before descended the Fund's shafts. A little scrambling on hands and knees brought us to the beginning of the aqueduct. After passing through a larger chamber in which we could stretch our backs, we advanced along a passage of lessening height, until at length we had to lie flat in several inches of mud and running water and wriggle along on our faces. After some 20 feet of this we reached the more perfect part, along which we advanced, sometimes crouching low, but usually on hands and knees, for some hundred feet. The narrowing of the channel and the assurance that in any case we could get little further, and that there was nothing more to see there, decided us to return.

I will now give a brief description of our joint observations on the tunnel. We traced its course for 176 measured feet. The last 100 feet are exceedingly winding, and the measure "cut corners" in such a way that no doubt the actual distance traversed was greater by several feet. The first few feet from the shaft are only partly excavated, and lie chiefly in earth and stones. Then the channel is seen to be rock-cut in the floor of the passage, and at present, at any rate, uncovered, *i.e.*, with no covering slabs. At a distance of 32 feet from the entrance there is an irregular chamber bounded by earth and stones, in which the water drops down over an evenly cut drop of 2 feet between sides of beautifully cemented rock or stone walls. There is no sign of any flagstones covering or having covered the channel. This nicely finished piece of work is only about 5 feet long, and then the channel runs under a roughly-cut rock roof with smooth stone floor and sides made of small irregular stones firmly embedded in abundance of black cement. From this point, as far as we traced the channel, the sides were of this character. The cement looked as new as when it was put on, indeed, the wet black made one continually think that it must be

fresh dark mortar, and I several times instinctively felt whether it had hardened! The floor, though thickly coated with soft mud in places, and at other parts covered with *débris* fallen from the roof, was, as far as could be felt, either smooth rock or very smoothly plastered. It seems all the way to be in good condition, as a continuous flow of water, apparently undiminished, accompanied us as far as we went. The roof, after a short distance of rock and a further part (where it has given way in several places) of stones and earth, is covered with flagstones, and near the point where we stopped we found a stone evidently taken from some old building. Its length was only exposed for 1 foot, and its width is 8 inches. On the under surface projecting into the tunnel was a well-cut pattern, of which I made a rough drawing.



A little further on, where the plaster was even more plentiful than usual, we found it for several square feet covered with herring-bone lines. On returning *viâ* the Valley of Hinnom we saw similar marks upon the plaster on some ruins there.

The only other mark of interest we found was upon a smooth surface of plaster on the right hand side, 44 feet from the entrance. It looked as if it had been made deliberately. The long stroke is about $1\frac{1}{2}$ inches long. The plaster between the stones is not very carefully rendered, and shows the marks of the tools.

As regards the direction of the channel we unfortunately cannot speak with certitude. At the beginning it ran down the valley, but some distance in made a great sweep towards the west.

The height of the aqueduct, where perfect, varied greatly. Occasionally it was as much as 6 feet, but the average was only about 4 feet 6 inches. The width was fairly regular. Our measurements gave from 1 foot 5 inches to 1 foot 8 inches, at about

2 feet 6 inches from the bottom. The tunnel is very winding, and its width was greatly lessened at one or two places by projecting masses of rock or large stones. Probably the numerous turns were made to avoid such obstructions. All the way there was a stream of running water from the spring.

Dr. Schick, who is very interested in the find, has kindly pointed out to me his notes about the "Second Siloam Tunnel" in the *Quarterly Statement* for 1891. It seems natural to conclude that this is the upper part of that tunnel, especially as Dr. Schick pointed out the very spot at which it might be expected to leave the Virgin's Fountain. At the same time it may be noticed there are several points of difference. *This* aqueduct contains a good stream of running water, is in perfect condition most of the distance traced, has a very regular width (much narrower than Dr. Schick's tunnel), and, as far as we have seen, contains none of those doors, obstructions, caves, &c., described in Dr. Schick's paper.

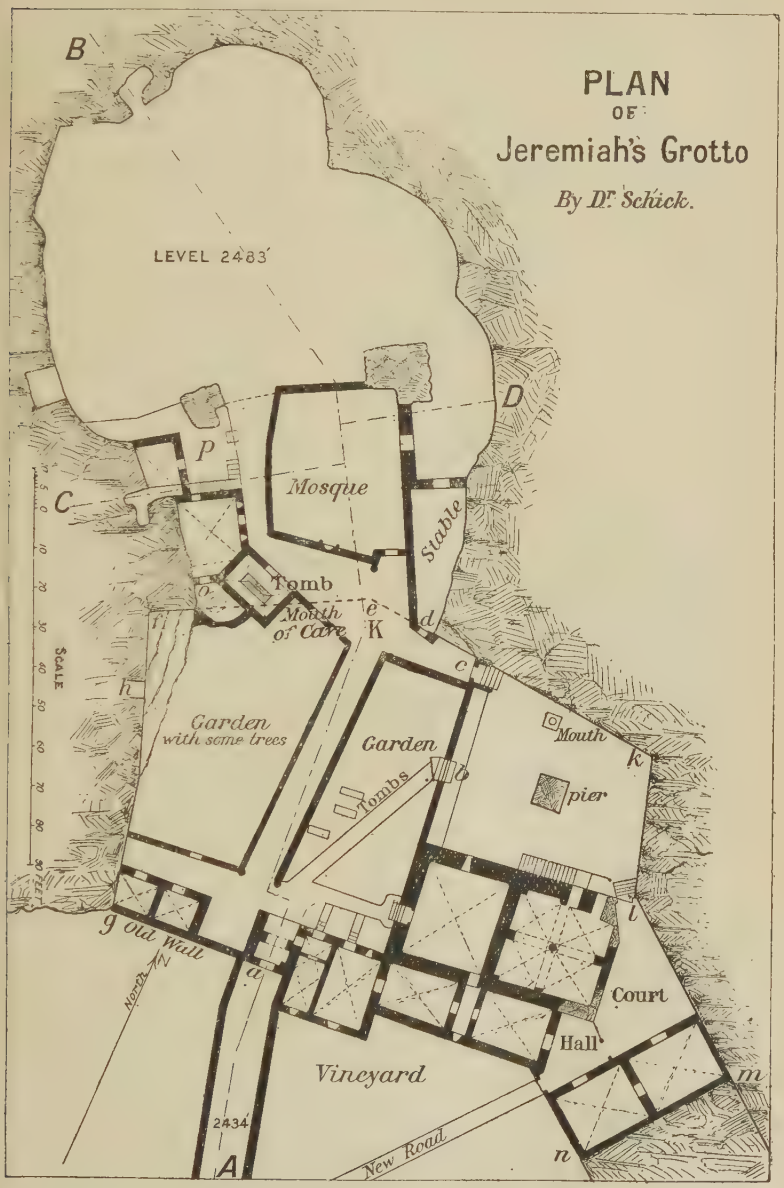
It occurs to me that it is most probable that the first 34 feet of rock-cut tunnel was open to the air originally, and it *may* be that this was the original exit of the water . . . . down the Kedron Valley until it was stopped by Hezekiah (2 Chron. xxxii, 4) spoken of in the "Memoirs" ("Jerusalem" volume).

N.B.—References to the Second Tunnel will be found in *Quarterly Statements* as follows:—Vol. for 1886, pp. 92, 97; 1887, p. 104; 1890, p. 257; 1891, pp. 13, 199.

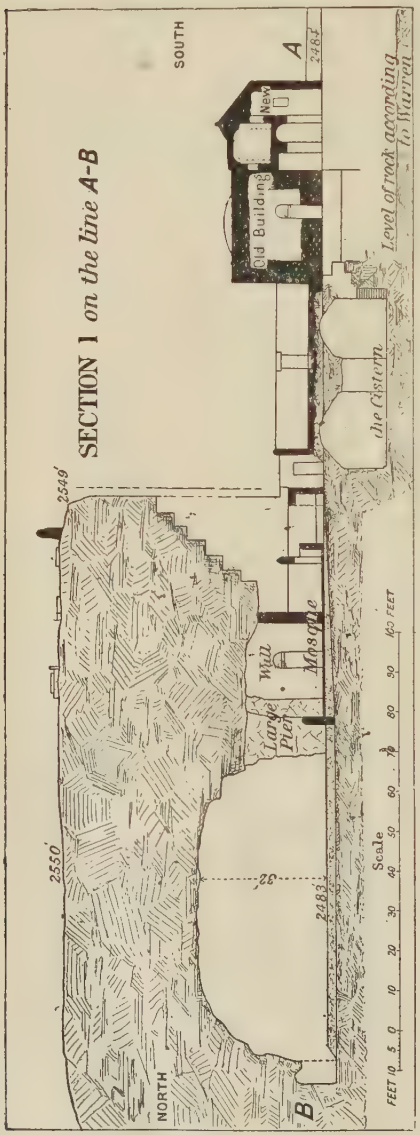
NOTES TO ACCOMPANY THE PLAN OF JEREMIAH'S GROTTO.

By Baurath Dr. Conrad Schick.

On reaching the door (*a*) in the old wall, one sees to the right a new building which projects southward into a vineyard. Passing through this door and a small hall, in which are shafts of pillars, one notices several paths, and a garden enclosed by new whitewashed walls about 5 feet high. The principal path does not run direct to the new entrance to the mosque, but turns west and then north to avoid three tombs. Entering the garden, and following a path which leads past the tombs, we come to a gate (*b*) in a higher wall and reach a paved court by a small flight of steps. Beneath this court is a remarkable rock-hewn cistern, which has, in its centre, a massive square pier of rock to support the roof. The mouth of the cistern is near the rock-scarp at the north end of the court, and its floor is reached by a flight of steps


PLAN
OF
Jeremiah's Grotto
By Dr. Schick.
B
LEVEL 2483
D
P
C
Mosque
Stable
Tomb
Mouth of Cave
K
e
d
c
f
h
Garden with some trees
Garden
Tombs
Mouth
k
pier
g
Old Wall
North
a
l
Court
Hall
Vineyard
m
2434
A
New Road
n
SCALE

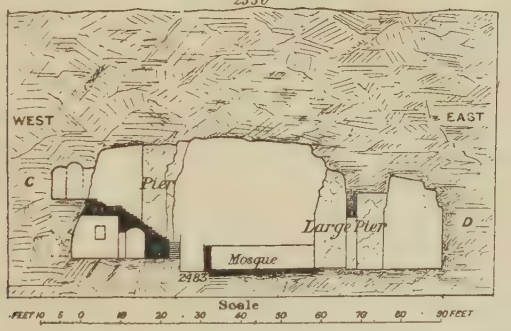
at the south end. South of the court there is an old rectangular building divided by a wall of masonry. The western portion is certainly Byzantine. Its floor is a little higher than that of the paved court, and there may be an underground chamber, but I could detect no opening. At the west end a door opens upon a flight of steps. The floor of the eastern part is fully 6 feet below the roof of the cistern. It has a pillar in the centre, and its eastern and southern walls are partially rock-hewn. The chamber is rather low and its roof is of masonry. It seems to have been a small church, with an apse at the east end, which was destroyed and never rebuilt. Baedeker and others consider it to be an ante-room to the cistern; but cisterns never have such ante-rooms, and the approach to the cistern from this chamber is narrow, low, and bad, with steps 2 feet high.



Passing now to the north-west corner of the paved court, we descend some steps to a door (*c*), which gives access to a path running west. Following this, past a door (*d*) that leads to an enclosure, which I call "the stable," we reach the northern end of the principal path. Standing here (at K on plan), we see the great scarp, with its two wings, towering above us, and wonder at the labour bestowed upon it. The scarp does not run in a straight line from west to east, but forms a re-entering angle (*e*), as shown by the line on the plan. The angle is near K and at the

highest part of the opening to the cave, marked by the dotted line on Section 1. The western arm of the angle (*e*, *f*) is 54 feet long, and the height of the scarp above the present surface of the ground is 64 feet. The west wing (*f*, *g*) leaves the scarp almost at a right angle, and runs southward for more than 70 feet at the same height. At the southern end the scarp of the wing is not perpendicular. At the north end, in the fourth stratum from the top, there is a square opening (*h*) which has never been examined ; and at the bottom there is a projecting mass of rock that rises about 10 feet above the level of the garden. There are young trees in the garden : the trees described by Tobler and others about 50 years ago do not now exist. The eastern arm of the angle (*e*, *k*) is 80 feet long and the same height as the western. The east wing (*k*, *l*, *m*, *n*) leaves the scarp at an obtuse angle, running 35 feet to *l* and 50 feet to *m*, and there turning west to *n*, where it ends, and is of no great height. The strata exposed in the high scarp differ in height. The upper one is

SECTION 2 *on the line C-D*



not solid rock, but a sort of natural conglomerate, above which there is a little earth. There are several of the usual cracks in the strata, but some are remarkable, as, for instance, one in the face of the scarp and one in the east wing.

Entering the cavern we pass through a door to the mosque, which is nothing more than a paved court of somewhat irregular form enclosed by a low wall. The north-east corner is formed by one of the rock piers which support the roof of the cavern, and in the south wall there is a plain mihrab. A little south of the mosque is a small building with, as the Sheikh said, the tomb of Sultan Adhem, from whom comes the name Edhemieh. The tomb is covered by a green cloth. Behind is a domed building (*o*), which possibly contains another tomb. North of it there is a room, and north of this again a sort of platform (*p*) about 3 feet high, upon which stands another room built against the rock. A flight of steps leads to the roof of the last room, and to a recess in the rock, which is said to be the resting place of some saint.[1] The rock-pier is partly

[1] I understood him to be "Assar" or Lazarus.

cut away like that to the east as if the mosque had once extended from one pier to the other (*see* dotted line on plan). At that time the entrance to the cavern and to the mosque was through the "stable." Former writers mention a bench of some length on the west side of the cavern. This has disappeared, and the Sheikh told me that it had been quarried away for building stone. At the north end there is a small recess, the bottom of which is a few feet lower than the floor of the cavern. The latter, as I remember it, was an uneven surface of rock, but it is now quite level and is apparently formed of quarry chippings set in lime. The height of the roof from the floor is 32 feet, the various levels are shown on the sections. The apse and mihrab-shaped recesses in the rock walls of the cavern seem remarkable, and in the west wall there is a square niche, that can only be reached by a ladder, which looks as if it might have been a cell.

As some advocates of the new Calvary say that at one time there was a church on this green (rather rocky) hill, of which traces can still be seen, I examined the place and found nothing. A little north of the end of the cave and on the northern slope of the hill there are rude traces of a moderate sized square enclosure which certainly was not a church, and probably belonged to some Moslem tomb.

It appears that the floor of the cavern was levelled in expectation of a visit from the German Emperor, and that the stones for the new walls were quarried inside the cave. The marks of the powder used in blasting are plainly visible.

THE MURISTAN, OR THE SITE OF THE HOSPITAL OF ST. JOHN AT JERUSALEM.

By Baurath Dr. Conrad Schick.

(A)—Historical Notes.

It is well known that the site of the former Palace and Hospital of the Knights of St. John now bears the name "Muristan," an Arabic expression (derived from the Persian) for a hospital.

Some fifty years ago it was, besides some buildings and ruins round its boundary, an elevated meadow or arable field, quadrangular in form and tolerably level, on an average 480 feet long from west to east, 430 feet broad from north to south, and raised some 25 feet above the streets where shops and arches penetrate into it, indicating that the whole might consist of similar buildings covered with a great mass of earth.

In the year 1867 Sir Charles Warren, on behalf of the Palestine Exploration Fund, made some excavations in the hope

of finding remains of the so-called second wall of the ancient city. He made a trench across the place from south to north on an average 25 feet deep, to the level of the surrounding streets. A report of the work is given in "The Recovery of Jerusalem," London, 1871, p. 269 *seq.* As regards the second wall, the result was negative. In general, the trench was not made deep enough, and no subsequent excavations have been made deeper than were absolutely necessary. In general, the masonry found standing was removed to use the stones again, or if standing on a fitting spot the new buildings were erected upon it. As this has been going on for so many years, it has caused me much trouble and continual watching to note what was found and then removed, in order that I might be enabled finally to make a plan of the whole ancient building, which I have now done, and submit it to the students of ancient Jerusalem. Standing so near eternity, I could not wait to give a more complete work, and have now prepared the necessary plans and sections. These are as accurate as I can make them, knowing that further excavations will complete and correct them where any mistake may have been made.

In 1867 Sir Charles Warren also made several shafts, which are shown in the drawings; one towards the north-west brought him 28 feet deep to a manhole and a stair leading into a number of cisterns. Over them, as is now proved, stood the Church Maria major; the rock is met at these cisterns (*see* "Recovery of Jerusalem," p. 272), and shown in the sections, Nos. 6 and 10.[1] Three years later, in 1870, the eastern part, or about one-third of the whole place, was given by the Sultan to the King of Prussia, afterwards German Emperor. In consequence this part was subsequently better excavated and examined, and a great deal of the accumulated earth removed, so that I was able to make a more detailed plan of it, which was first sent to the Prussian Government, and then also to Sir Charles Warren, who published it in his portfolio with some sections (Plate L). The northern part of it, or the church with the former convent, is also published in the *Quarterly Statement*, 1872, p. 100, and more fully described in the "Jerusalem" Volume, p. 254 *seq.*

Soon afterwards the Greek Convent began to clear partially their part, east of the so-called Gethsemane Convent, and to erect

[1] The sections and plans referred to but not reproduced are preserved in the office of the Fund.

a row of eight shops, but as they made the new street which it was designed to form, and to call "Crown Prince Frederick Street," too narrow, a new plan was prepared, and the end shops had to be pulled down. This seems to have led the Greek Convent to secure their ground throughout the whole line by building shops along it. Their foundations are not deep, and so neither the lie of the rock nor anything of interest was found.

In building the new Erlöserkirche, the foundation stone of which was laid in October, 1893, new foundations had to be laid throughout, as the old walls rested on *débris*, and not on firm ground. In digging for new and rock foundations it was found that there and in the neighbourhood was once a quarry and the rock was hewn not to a level, but in high steps at different levels, everywhere lying deep under the surface, as I have shown it in the drawings.

As during the last four or five years the Greeks went on clearing their ground, many things were discovered, which I have indicated on the plans and sections. These are:—No. 1. A plan of the whole Muristan with the immediate surroundings, showing things underground; No. 2. A plan of the same extent, showing things above ground (as far as known). Then to show the various levels, &c., there are ten sections, namely:—Nos. 3, 4, 5, 6, 7, from west to east, and Nos. 8, 9, 10, 11, 12, from north to south, marked with the respective letters on the plans.

(B)—Old History of the Muristan.

Of this we know very little, as the real knowledge of the place begins with the Crusading time. That it had an older history is certain. In Nehemiah's description of the rebuilding of the city wall, we may positively expect some reference to it, and the pool of Hezekiah goes back even further This pool, just west of the place in question, is ascribed to King Hezekiah, the hero in water-works at Jerusalem, and not much can be said against this idea. The ancient city of David and Solomon was situated on the southern hill, and its northern wall was south of the Muristan, which was hence outside that city. Now east of the Church of the Holy Sepulchre, or north-east of the Muristan, is a levelled and high platform with perpendicular sides,[1] as I have pointed out elsewhere. That such a locality was of importance even in the

[1] Not recognisable by one unacquainted with the spot, as all is covered with *débris*, earth, and houses built thereon.

remotest time, and in fortifying the capital town of the Israelite kings had to be taken into consideration, is quite certain, so much so, that Sir Charles Warren even put the celebrated stronghold "Zion" there ("The Temple or the Tomb," London, 1880, p. 33). We may therefore with good reason suppose that in very early times some buildings were erected on it as a kind of detached fortress, and it is quite natural that the space between this and the city wall may have had houses or public buildings erected on it, so that Hezekiah found it good to embrace it with a wall (2 Chron. xxxii. 5), and at the same time to bring the detached fortress into close connection with the main fortifications of the city. This is the first mention of the so-called second wall. In the western part of this new addition to the existing city Hezekiah built a pool to provide this quarter with water. The upper part of the shallow and broad valley there was just a fit place for such a pool, only a dam had to be built or a strong wall, which probably became the "broad wall" mentioned in Neh. iii, 8, xii, 38, a piece of which I saw in 1846, as shown in Section No. 4 (*see also* Section 10).

In Neh. iii, 7, is mentioned the throne or residence (or seat) of the governor, meaning apparently the fortress I have mentioned, and afterwards it is mentioned that one of the apothecaries repaired, *i.e.*, fortified, Jerusalem unto the "broad wall," which, from the configuration of the ground, must have been just at the Muristan (Neh. iii, 8). A hundred and thirty-six years before, at the destruction of Jerusalem by the Chaldeans, this quarter was destroyed, and this was the beginning of the great mass of *débris* and earth there, which it would seem that Nehemiah levelled, and hence the special expression ויעזבו is used in Neh. iii, 8, but not elsewhere. In our Lord's time this quarter was crowded with buildings, which were destroyed after the Romans had taken the second wall, and this was the second step in causing the accumulation of *débris*, which formed a place for exercising the troops stationed in the neighbouring fortress.[1] After the Church of the Holy Sepulchre had been built by Constantine in its neighbourhood, the place in course of time became the property of European Christians for the lodging of pilgrims, until the time of the Crusades, when the Knights of St. John took up their abode there and made it the centre of their activity. As all this is well known I will not dwell upon its history under the Christians.

[1] That is after the rebuilding of the city by Hadrian.

(C)—Explanation and Description of the Plans and Sections.

1. *The Second Wall.*—There have been found in several places remains indicating the existence of an old and thick wall, but not one of these is without doubt, and hence the result is to some degree negative. Still these remains are of great importance, and may, by future excavations, be proved to be traces of the second wall. Beginning in the east, there was found under the flooring of the old church, where now is the Erlöserkirche, an old wall of remarkable thickness running along near the middle of the church (*see* Plan No. 1), which was at the time considered to be a portion of the second wall. In the official report of the visit of the German Emperor to the Holy Land—"Das deutsche Kaiserpaar im Heiligen Lande," Berlin, 1899, p. 182—it is said:—"It is of great interest that the altar of the new church came to stand just upon the city wall of the time of Christ." And when the Moslem house north-east of the large apse was built some forty years ago, I saw a wall of large stones under ground exposed in digging the foundations, so most likely outside the apse the old wall had a corner and bent there towards the north, as shown in dotted lines on Plan No. 1. At the western part of the church this wall had a breach in it, and on the north and south a mass of masonry, as if there had been there a tower, afterwards utilised for a cistern, and over it the belfry had in the time of the Crusaders been erected. The tower of the new church has also been placed there, but the cistern was done away with. West of the church, when some years ago new foundations were laid for the new shops and buildings along the west side of the Crown Prince Frederick Street, about 10 feet below the surface, as it then was, a thick wall was discovered just between the two new piers, as shown in Section No. 11 and Plan No. 1, and its continuation in No. 10, where the wall came even higher. Further west, in the Gethsemane Convent, are in the same line large stones of a ruinous wall, which certainly went further west; but all is there covered with buildings. In the same line, close to Christian Street and west of it, I saw large stones when the street was improved. They had to be broken and removed. The line drawn further west for 150 feet meets the house projecting northwards into the road, so that the latter makes twice a bending. This house stands on a wall about 60 feet long and 11 feet thick,

all solid and in the very line, so that I consider it to be a piece of the ancient second wall. At its western end, just on the top of the hill, is ancient-looking masonry, and the road bends southwards, running first through a covered archway in a direction towards David's Tower, but going in zigzag[1] for 300 feet to the well-known remains of the second wall found about twelve years ago. If this was really the second wall, Calvary and the Holy Tomb would have been 235 feet outside of it. Whilst I am convinced that these are traces of the second wall, I confess there are no absolute proofs of their being such, and hence objections may be raised against this opinion.

2. *The Churches.*[2]—The place contained three churches, two of which have been known for a long time, and the third, or remains of it, were found by the excavations of the Greeks a few years ago. The eastern church, the latest built of the three, has now been rebuilt as the German Erlöserkirche, and it is not necessary to describe it here. It was the Maria Latina minor, not major, as it has been hitherto considered.

The second or, as it is now proved, the Maria Latina major, was found 25 metres distant south-west of it, and just over the tanks Sir Charles Warren discovered in the year 1867, and described in "The Recovery of Jerusalem," p. 272. Of the southern (smaller) apse, as well as of the large or middle one, two courses of masonry had been preserved, whereas the northern apse had disappeared, and in its place a cistern mouth was found. There were also a few basements of the former piers still *in situ*, as also some parts of the walls, so that the plan of the church could be restored (*see* Plan). Several very fine large carved capitals were also found, not of pillars but of piers, and the best preserved of these may be still seen. Small marble pillars were on the edges of the apses *in situ*. The workmanship of all this was better than on the first mentioned church. In plan and size both churches were very nearly the same. Some other carved stones were also found, similar to those at the northern entrance of the Erlöserkirche, and at a spot indicating that also this church had an entrance at its north side. Under the northern side aisle cisterns were found, but it was not so under the southern aisle, where there seems to

[1] The old wall goes in a more direct line now under the houses.

[2] This account of the churches has been already published in the *Quarterly Statement* for 1901, p. 51. It is repriuted here in order to make Dr. Schick's careful article complete.

have been a crypt in two stories, one above the other. A stair leading down into this crypt has not yet been found. As south of it new foundations were being dug, the workmen came upon a stone sarcophagus, the lid of which is gone, proving that also this part had been a crypt. As the Erlöserkirche and its predecessor had in the south-west corner a bell-tower, so it probably was here, as the very strong piers and the great masonry below (Sir C. Warren's southern little cistern) show.

The third church is the well known Mar Hanna (John the Baptist) in the south-west corner of the place, consisting of a church underground, and over it another church above ground. So it was even in ancient times; it is one of the oldest churches in Jerusalem, much older than the two others mentioned. In the *Quarterly Statement*, 1899, p. 43, is a plan and some sections of the lower church, by Mr. A. C. Dickie, A.R.I.B.A., showing that under its flooring is a kind of crypt. It is clear that once the underground church stood free round about, perhaps with a prolongation towards the west, as the chief entrance door was on the south side. On the side of the present stair at the southern end of the narthex is a triangular-shaped mass of masonry which may have been made by the Crusaders to get a basement for a bell-tower. The church itself was Byzantine, even the upper one, which at a later period was destroyed and again rebuilt. That there were three churches on the place, each with a bell-tower (hence also Mar Hanna had one), is proved by a drawing made about 1150, and published in the "Zeitschrift des Deutschen Palästina-Vereins," 1891, p. 137, showing in one line, beside the hospital, the three churches—Ecclesia St. John, Ecclesia Maria ad Latinam major, and Ecclesia Maria ad Latinam minor, each with a bell-tower.

3. *Monasteries or Convents.*—The Christians had here, even before the Crusades, some settlements for merchandise, the lodging of pilgrims, and accommodation of the sick. In the Crusading period the hospital stood south of the Church of the Holy Sepulchre, and close to it was a convent, which was on the site of the present Gethsemane Convent; most likely also there was one at Mar Hanna, as is the case even now. The history is not quite clear to me, but after the Church Maria major had been built there was another convent close to it, most likely east of the Gethsemane Convent, and when the Maria minor was built

PALESTINE EXPLORATION FUND.

PLAN of Underground of the whole MURISTAN or Hospital of the Knight's St. John at JERUSALEM.

NORTH

Large Byzantine Cistern

Greek

Drain

House

Covered Street to Church of the Holy Sepulchre

Moslem House

Shops

Under Shops

Broken now Garden

C.

Thick wall found below

Wall found the Former Church Maria Latina Minor

Former Lane or Shops

Cistern

Lane

Covered lane

door

Under the shops

Deir el Alami

Cistern under Church

Court

Pool

Sarcophagus

Former Lane

Shaft

Es Zuk

Canal

Drain

Covered Road

Cistern

Former Parapet

Former Parapet

The Pool of Hezekiah

Under Christian Street

The Boilers

Double Cistern

The lower Church Mar Hanna or St John

under flooring here

Canal under flooring

The Passage under Sûk el Bizâr

Martin, Hood & Larkin, Photolitho, Cr. Newport St. W.C.

FEET 10 0 10 20 30 40 50 60 70 80 90 100 150 200 250 300 FEET

SOUTH

SCALE.

June 1900. Baurath Dr. C. Schick.

another convent was established, chiefly for females. This was situated beyond the ancient "lane" and south of the church, and extended southwards to about the double cistern.

4. *The Hospital of St. John.*—This was the name of the whole establishment, but a special part of it formed the real hospital, in its two capacities: First, a house for pilgrims, and second, for lodging and nursing the sick, chiefly strangers or pilgrims. As the Knights of St. John had their origin here, and the Order grew quickly in numbers and influence, they built, near the holy sites, churches, convents, and a palace for their own residence. Being all erected about the same time, the buildings were all according to one plan and style, massive, with square piers, supporting vaults, and arches. The best specimen now to be seen is the row of strong arches in David Street. The whole area of the place formed one building, although consisting of various parts and often divided by narrow lanes, containing some open, but small, courts for light and air. Erected by Europeans not sufficiently experienced, they were not always constructed according to the rules of health, as they were obliged to keep their animals in the building itself. John of Würzburg, about A.D. 1160, says:—"Over against the Church of the Holy Sepulchre on the opposite side (of the way) towards the south is a beautiful church built in honour of John the Baptist, annexed to which is a hospital wherein in various rooms is collected together an enormous multitude of sick people, both men and women, who are tended and restored to health daily at very great expense. When I was there I learned that the whole number of these sick people amounted to two thousand, of whom sometimes in the course of one day and night more than fifty are carried out dead, while many other fresh ones keep continually arriving" (Transl. of Pal. Pilg. Text Soc., p. 44). And a few years later Theodorich says:—"Here on the south side of the church (St. Sepulchre) stands the Church and Hospital of John the Baptist. . . . . No one can credibly tell another how beautiful its buildings are, how abundantly it is supplied with rooms and beds and other material for the use of poor and sick people, how rich it is in the means of refreshing the poor, and how devotedly it labours to maintain the needy, unless he has had the opportunity of seeing it with his own eyes. Indeed, we passed through this palace and were unable to discover the number of sick people lying

there, but saw that the beds numbered more than one thousand" (Transl. Pal. Pilg. Text Soc., p. 22).

This palace was in such a good condition in A.D. 1187 that Saladin, after he had taken the city, fixed his residence in it. Afterwards, nearly always, Christian pilgrims found refuge there, even down to the end of the fifteenth century. In A.D. 1322 Sir John Maundeville says:—"Before the Church of the Holy Sepulchre, two hundred paces to the south, is the great Hospital of St. John. . . . . In it are one hundred and twenty-four pillars of stone, and in the walls of the house, besides the number aforesaid, there are fifty-four pillars that support the house. From that hospital going towards the east is a very fair church, which is called Our Lady the Great, and after it is another church very near, called Our Lady the Latin" ("Early Travels in Palestine," Bohn, 1848, p. 168).

On Plan No. 1 is shown in the north-west corner a large building recently discovered, nearly full of earth and mire from the neighbouring bath, accumulated during several centuries, and the whole buried under a great mass of earth (as the sections No. 6 and No. 9 will show) with a large heavy tree standing over it. It consists of one large hall with three rows of piers still standing, seven in each row, and with those connected with the walls, and those of the southern prolongation, making forty-eight. The length of this chamber is about 230 feet, and its width about 120 feet, inside measurement; the arches in it are about 18 feet high. There is still *in situ* the base of a pillar, the shaft of which is lying on the pavement close by (*see* No. 2). To the east the vaulting is broken in, giving now light into the old vaults. Besides the piers in this large hall there are many others, especially in the southern part, east of Mar Hanna, as shown on Plan No. 1. One may have counted, *as I have done*, one hundred and sixteen, before they were covered up. Several are much stronger than the others to bear upper stories. How many of the latter really had been built no one can say, as apparently the Knights were driven away before the whole design was completed, and a good deal of the finished work was afterwards broken down and destroyed. The residence of the Knights and their stables were certainly in this south-east quarter.

5. *The Cisterns.*—Such a building, containing so many people, required a large supply of water. For this purpose a good many

cisterns, some of them very large, were made in the lower ground, although several may have already existed in the former Jewish city at this place. On Plan No. 1 I have entered all those which are now known and their size, but there are certainly a good many still covered up. In Plan No. 2 the mouths of them are nearly all marked. As shown in the sections, none of the cisterns at this place are cut entirely in the rock, all are for the greater part built, and in some only the lower part is let into the rock. Only one is fully cut into the rock, namely, that on the north, opposite the street, under St. Abraham's Convent (*see* Section No. 10). It does not belong to the Muristan. Also it may be observed that before the Crusades the general level of the surface here was much lower, and buildings standing already there were afterwards made into cisterns by the Crusaders (*see* Sections No. 6 and No. 10).

The large Byzantine cistern at the northern end of Plan No. 1 (Sections No. 7 and No. 11) is outside the ground of the Knights. It is described in the *Quarterly Statement*, 1889, pp. 111 and 210, with plan and sections. At Mar Hanna several cisterns were made in the already existing masonry, when the lower church lost its importance and the level of the surrounding ground was brought up nearly to the height of the present Christian Street, and when the bell-tower to Mar Hanna Church was built by the Crusaders. Opposite the street at the base of the "broad wall" of Nehemiah I could only detect two cisterns (*see* Plan 1), the northern one goes down about 12 feet deeper than the bottom of the pool there, and must be of some age; the other (in the south) is a modern one made when the rest of the broad wall was taken away (in 1847) and a house built there. How deep it goes down I cannot say. The old cistern in the ground of the Erlöserkirche has been abolished, and the one north-east of it under the Russian building is modern. It does not go down to the rock, and is not covered with an arch but with iron rafters (made in 1889). The two in the Gethsemane Convent are above ground, built into already existing masonry. Two old cisterns were closed up when the Crown Prince Frederick Street was made, and are now underground and of no use.

The bath in the western street has no cistern, at least I could detect none. The water is drawn up by buckets from Hezekiah's

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Pool, and conveyed in a channel crossing Christian Street on an arch to the bath.

6. *Underground Passages, Drains, &c.*—The chief underground passage is under David Street. It runs now from the ditch of the castle, where the entrance to it can be seen, eastwards down to the temple area, where Sir Charles Warren excavated it for several hundred feet ("Recovery of Jerusalem," p. 90). At the Muristan (or rather in front of it) I, thirty years ago, excavated it from Christian Street down to the Sûk on account of drains leading into it. One of these drains I discovered in 1876 under what is now the new entrance from David Street to the Crown Prince Frederick Street. It is a very fine one, and most likely originally came down from Mar Hanna. The workmanship of it is Byzantine, not Crusading (*see* Plan 1 and Section No. 11).

Another common drain never properly finished I came into by the Shaft No. 6, which I made in 1876 (*see* Plan No. 1 and Section No. 4). It is apparently Crusading, and runs eastwards to the Sûk, where the top slab is broken in, and further excavation was impossible. In the large double cistern there is also an outlet (*see* Plan No. 1 and Section No. 5). How far it goes eastward I cannot say. East of the bath in Christian Street an inferior drain was recently found. The drains marked under the public streets are modern.

7. *Streets, Roads, and Lanes.*—Of the four streets round the Muristan I need not say anything, except that their levels have by paving, &c., become a little higher than at the time when the Ordnance Survey plan was made in 1864–5. In the Crown Prince Frederick Street is now an entrance to the Erlöserkirche, and this street divides the German property from that of the Greek Convent. It rises towards the south and, including the footpath on both sides, is 23 feet wide. Along its western side the Greek Convent have built the fronts of a row of shops (*see* Plan No. 2). At its southern part on the eastern side a low wall is built as a fence, and continued eastwards beside the road to the cistern and the so-called Dar Hamdi belonging to the Greek Convent. Some old piers which stood where the Crown Prince Street now runs were removed (*see* Plan No. 1).

That in ancient times there were lanes between the cluster of buildings is certain, and Plan No. 1 indicates several such. First, in the east of the Muristan buildings a narrow lane went

northwards with slight bendings to St. Maria minor (the Erlöserkirche). East of the newly-found St. Maria major Church a lane ran from the convent in the north to the palace of the Knights in the south. Just south of the hospital great hall was a narrow and partly covered lane, running east and west, and a short distance more south a regular way, 13 feet wide and a good part of it covered by arches. As there is still so much earth in this road, I am not able to give details, nor of the steps which probably were there, as shown in Section No. 5. Most likely this was the access to the old building there, anterior to the Crusades, and ran at the bottom of the shallow valley there. More to the north a lane went not quite straight from the hospital great hall eastwards between the convent on the north and the Church St. Maria major on the south, across the other above-mentioned lanes to the south side of the Church St. Maria minor.

8. *Shops and Magazines.*—The greater part of the Muristan is now surrounded by shops and magazines. The latter are chiefly along David Street, which is on the south. Along the western side in Christian Street there are small shops, and on the opposite side of that street somewhat larger ones. In some places upper rooms or houses are put over the shops on both sides. In the northern street going from west to east there are eight shops, then a mosque with a minaret, and opposite to this the steps and Mar Yakûb; then follows the Gethsemane Convent and Churchyard, and beyond it new shops on both sides, beyond which is the Erlöserkirche, and opposite to it the new Greek and Russian houses. On the eastern side the house at the northern corner belongs to a Moslem, then follow 15 shops belonging to the German part of the Muristan, and beyond these many shops in the covered street.

9. *The lie of Rock at the various parts of the Muristan.*—This is shown in the sections, when compared with the plans, and a detailed description is not needed, but only some remarks, viz.:—At some places the rock has been ascertained by excavations, or in some cisterns, at others it is so near the surface that the walls of the buildings without question go down to it. Masses of strong masonry give the impression that they are founded on rock; but as I have seen such standing on earth or *débris*, so it may be with some of these here. In all cases where I was not certain, I have not shown them in the sections as going

down to the rock, but have marked them with a note of interrogation.

Other buildings, like the walls of the shops in the Sûk and similar ones, certainly do not go down to the rock. The Erlöserkirche is now entirely founded on rock, but this is not the case with new buildings, except in a few instances.

In some places I have put the line of the rock by conjecture, as when, knowing it at two points, I have drawn a line between the two. As regards the present street levels, I have been guided by the Ordnance Survey plan, so there can be no great mistakes. At the place where stones were quarried I have marked in the sections with dotted lines the original surface of the rock.

There is one point of importance respecting which I am uncertain. Outside the Muristan on the north, the east side of the great Byzantine cistern under the new Greek building was covered with cement, so I could not ascertain whether it was of masonry entirely or of rock to some height. As 40 feet further east the rock is as deep as the bottom of the cistern, one might suggest that it is so in this eastern end of the cistern itself. But it may be that there was a mass of rock there on which a portion of the city wall may have rested with a face on both sides. And if there is no rock there, one might ask why they did not prolong the cistern eastwards to the rock, coming up to the surface there? Also about 10 or 15 feet to the north, rock is visible on the present surface of the ground. So most likely it may go further south as a projecting ledge.

From all this it will be evident that from Hezekiah's Pool there existed a depression of the ground or shallow valley, sloping down eastwards, that where the Church of the Holy Sepulchre stands the ground was higher, and also that south of David Street the rock was higher than to the north of it. As this valley was not very deep, the second wall may well have been carried over south of the Holy Sepulchre as shown in the Sections No. 10 and No. 11 in dotted lines. Further west the ground where the second wall stood was even higher than the ground north of it, and in the east at the quarry the wall made a bend to the north, and so came again on high ground. The point of the bending seems to me to have been east of the Erlöserkirche, as Plan No. 1 shows. This does not exclude the supposition that there was further west another

one at the rock ledge, and so the wall was here double, which certainly was the case in some places.

10. *The Pool of Hezekiah and the "Broad Wall."*—The latter is mentioned after the second wall had been built by King Hezekiah (2 Chron. xxxii, 5) in Neh. iii, 8, and xii, 38. It was apparently built as a dam on the eastern side of the pool, and as it was over 30 feet thick, and most likely a road ran over on its top, it was called the "broad" wall. It was at the same time a connecting link between the old or first wall in the south and the so-called second wall in the north. In A.D. 1846 there was still standing a piece of it about 70 feet long, built of large stones, and about 15 feet high above the level of Christian Street, on its top, grass was growing, so I have seen it. The next year it was taken down by the Greek Convent, the stones broken into the usual building stones, and a new house built there three stories high (*see* Section No. 4). The ground sank rapidly from it eastwards (one in eight and a half), and also from the heights south and north to levels deeper than the bottom of the pool. Accumulation of *débris* soon began there, and, as the spot was inside the town, buildings were afterwards erected, and a new surface, of some extent, was created about 2,450 to 2,460 feet above the sea, as the sections show. By further destruction the general level of the surface became higher and higher, so that the Church of the Holy Sepulchre now stands even lower (*see* Section No. 9).

11. *Shafts and Sir Charles Warren's Trench.*—Some of the shafts are marked with numbers on the plans. They are the same as given in Sir C. Warren's portfolio, Plate L, and described in the Jerusalem Volume, p. 257. The trench is described in "The Recovery of Jerusalem," p. 271. All those which are described there I may properly omit here. Now that the earth has been removed, what Sir C. Warren said about the discoveries is proved to be correct. The situation and line of this trench are shown on Plan No. 2. The building this trench met near Crown Prince Frederick Street, which is certainly very old and goes down to the rock, has never, I am sorry to say, been properly excavated, and so we shall never get a full knowledge of what is underground.

12. *Mosques.*—These are naturally more modern, and, as it seems, not so very old. The minaret now standing opposite the Church of the Holy Sepulchre, at the north side of the former

hospital, was, according to Tobler, built in 1417, and Sir John Maundeville, in 1322, does not speak of a mosque there, which he certainly would have done if one had been situated so very near the hospital. It is now a three-storied one, as shown in Section No. 9. The upper one was built during my residence in Jerusalem. The mosque in David Street, just east of the entrance to Crown Prince Frederick Street, is rather an inferior one, and the burying place of a Moslem sheikh. It is used for prayer by the people of the Bizar. This tomb is the reason why the new street has got such a slanting line.

13. *Plans and Sections.*—All these are based on the line 2,425 feet above the sea, as about the deepest point in the whole area, and the highest is 75 feet more, or at the level of 2,500 feet. Hence at the Muristan the deepest point of the valley is only about 57 feet below the bottom of Hezekiah's Pool.

RESULTS OF METEOROLOGICAL OBSERVATIONS TAKEN AT JERUSALEM IN THE YEAR 1900.

By James Glaisher, F.R.S.

The numbers in column 1 of this table show the highest reading of the barometer in each month; of these the highest, as usual, are in the winter, and the lowest in the summer months; the maximum for the year was 27·757 inches, in January, and the next in order 27·566 inches, in November. The highest reading in the preceding 39 years, viz., 1861 to 1899 inclusive, was 27·816 inches, in December, 1879, and the next in order 27·800 inches, in November, 1870.

In column 2 the lowest reading of the barometer in each month is shown; the minimum for the year was 27·043 inches, in February, and next in order 27·163 inches, in March. The lowest reading in the preceding 39 years was 26·860 inches, in March, 1898, and the next in order 26·970 inches, in March, 1896.

The numbers in the 3rd column show the extreme range of readings in each month; the smallest was 0·094 inch, in July, and the next in order was 0·145 inch, in August; the largest was 0·516 inch, in February, and the next in order 0·468 inch, in

January. The mean monthly range for the year was 0·279 inch. The mean for the preceding 39 years was 0·312 inch.

The range of barometer readings in the year was 0·714 inch. The largest range in the preceding 39 years was 0·935 inch, in 1898; and the smallest 0·491 inch, in 1883.

The numbers in the 4th column show the mean monthly pressure of the atmosphere; the highest was 27·509 inches, in January, and the next in order 27·476 inches, in November; the lowest was 27·267 inches, in July, and the next in order 27·303 inches, in August. The yearly mean pressure was 27·379 inches. The highest mean yearly pressure in the preceding 39 years was 27·442 inches, in 1863; and the lowest 27·357 inches, in 1894. The mean yearly pressure for the 39 years was 27·390 inches.

The temperature of the air reached 96° on May 6th, and there was 1 other day in May when the temperature reached 90°. In the preceding 18 years the earliest day in the year the temperature was 90° was on March 25th in the year 1888; in June it reached or exceeded 90° on 6 days; in July on 5 days; in August on 5 days; and in September on 1 day, viz., the 1st, and this was the last day in the year of a temperature as high as 90°. In the preceding 18 years the latest day in the year this temperature reached 90° was on October 23rd in both 1887 and 1898. The temperature reached or exceeded 90° on 19 days during the year. In the year 1898 the number of days of this high temperature was 12, and in 1887 was 73; the average for the 18 years was 35. The highest temperature in the year was 98°·0, on September 1st; the highest in the preceding 18 years, viz., 1882 to 1899, was 108°·0, in June, 1894.

The temperature of the air was as low or lower than 40° in January, on 8 nights; in February, on 4 nights; in March, on 4 nights; and in December, on 2 nights. Thus the temperature was as low or lower than 40° on only 18 nights during the year. In the year 1892, the number of nights of this low temperature was 19, and in 1894 was 113; the average of the 18 years was 55. The lowest temperature in the year was 35°, on both December 19th and 20th. The lowest in the preceding 18 years was 25°, which occurred on 2 nights, viz., December 31st, 1897, and on January 1st, 1898.

The highest temperature of the air in each month is shown in column 5. In January it was 60°·8, being 1°·0 above the mean of

the 18 high day temperatures in January. The high day temperature was also above its average in March, April, May, June, September, November, and December, and below in the remaining months. The mean for the year was 84°·5, being 0°·9 above the average of 18 years.

The lowest temperature of the air in each month is shown in column 6. In December it was 35°·0, being the lowest in the year, and 1°·9 above the average of the 18 low night temperatures in December. The low night temperature was also above its average in January, February, March, April, May, July, August, September, October, and November, and below in June. The mean for the year was 47°·9, being 3°·4 above the average of 18 years.

The range of temperature in each month is shown in column 7; the numbers vary from 23°·8 in January to 45°·8 in June. The mean range for the year was 36°·6, being 2°·6 less than the average of 18 years.

The range of temperature in the year was 63°·0. The largest in the preceding 18 years was 81°·0, in 1894, and the smallest, 63°·5, in the year 1885.

The mean of all the high day temperatures in each month is shown in column 8. The lowest was 52°·7, in January, being 1°·9 higher than the average. The highest was 84°·8, in August, being 3°·6 lower than the average. The mean for the year was 71°·7, or 0°·2 below the average of 18 years.

The mean of all the low night temperatures in each month is shown in column 9. The lowest was 43°·0, in January, being 4°·8 higher than the average. The highest was 65°·7, in both July and August, and this mean was 1°·3 higher than the average in both July and August. The mean for the year was 55°·4, or 2°·8 above the average of 18 years.

In column 10 the mean daily range of temperature in each month is shown; the smallest was 9°·7, in January, and the next in order, 11°·5, in February; the greatest was 20°·2, in June, and the next in order, 19°·9, in May. The mean for the year was 16°·3, being 3°·1 less than the average. The smallest ranges in the preceding 18 years were 9°·3, in January, 1883, and 9°·4, in December, 1897; the greatest were 33°·8, in August, 1886, and 30°·1, in August, 1887. The smallest mean for the year was 16°·4, in 1897, and the greatest, 24°·3, in 1886.

The mean temperature of the air, as found from the mean of the maximum and minimum temperatures only, is shown in each month in column 11. The lowest was 47°·8, in January, and the next in order were 49°·4, in February, and 52°·1, in December; the highest was 75°·2, in August, and the next in order were 74°·9 in July, and 73°·6, in June. The mean for the year was 63°·5, being 1°·3 above the average of 18 years. The lowest mean temperatures in the preceding 18 years were 39°·8, in January, 1890, and 41°·1, in January, 1898; the highest were 81°·2, in August, 1890, and 81°·1. in July, 1888. The highest mean for the year was 63°·5, in 1892, and the lowest, 60°·0, in 1894.

The numbers in column 12 are the mean readings of a dry-bulb thermometer. If those in column 12 be compared with those in column 11, it will be seen that those in column 12 are a little higher in every month, the difference of the means for the year being 2°·1; the mean difference between the mean temperature of the air, and that at 9 a.m., for the 18 years was 3°·2.

For a few days in the winter months the dry and wet-bulb thermometers read alike, or nearly so, but in the months from March to October the difference between the readings often exceeded 15°, and was as large as 25°·0 on June 8th.

In column 13 the mean monthly readings of the wet-bulb thermometer are shown; the smallest differences between these and those of the dry-bulb were 2°·5, in February, 2°·7, in December, and 4°·7, in January; the largest were 10°·4, in October, 10°·3, in April, and 9°·8, in both June and July. The mean for the year was 58°·3, and that of the dry-bulb 65°·6.

The numbers in column 14 are the mean temperature of the dew-point, or that temperature at which the air would be saturated by the quantity of vapour mixed with it; the smallest difference between these numbers and those in column 12 was 5°·1, in February, and the next in order were 5°·4, in December, and 9°·7, in January. The mean temperature of the dew-point for the year was 52°·4; the mean for the 18 years was 50°·0.

The numbers in column 15 show the elastic force of vapour, or the length of a column of mercury in inches corresponding to the pressure of vapour; the smallest was 0·248 inch, in January; and the largest 0·546 inch, in August. The mean for the year was 0·407 inch; the average for the 18 years was 0·374 inch.

In column 16 the weight in grains of the water present in a cubic foot of air is shown; it was as small as 2·8 grains in January, and as large as 5·9 grains in September. The mean for the year was 4·4 grains; the average of the 18 years was 4·1 grains.

In column 17 the additional quantity of water required to saturate a cubic foot of air is shown; it was as small as 0·7 grain in February, and as large as 4·4 grains in July. The mean for the year was 2·9 grains; the average for the 18 years was 3·3 grains.

The numbers in column 18 show the degree of humidity, saturation being represented by 100; the largest numbers appear in January, February, and December; and the smallest in April, May, and October; the smallest of all was 51, in April. The mean for the year was 64; that of the 18 years was 60.

The numbers in column 19 show the weight in grains of a cubic foot of air, under its mean atmospheric pressure, temperature, and humidity. The largest number was 500 grains in January, and the smallest 461 grains in June. The mean for the year was 480 grains; the average of the 18 years was 483 grains.

The most prevalent winds in January were N.E., E., W., and N.W.; and the least prevalent wind was S.; in February the most prevalent was S.W., and the least prevalent was N.; in March the most prevalent was N.W., and the least was N.; in April the most prevalent were N.W. and N., and the least was E.; in May the most prevalent were S.W. and N.W., and the least was S.; in June the most prevalent were N.W. and W., and the least prevalent was S.; in July the most prevalent were N.W. and W., and the least were S.E. and S.; in August the most prevalent were W. and N.W., and the least were N.E., S., and S.W.; in September the most prevalent were N.W. and W., and the least were S.E. and S.; in October the most prevalent were N.W. and W., and the least was S.; in November the most prevalent was N.W., and the least were S.E. and S.W.; and in December the most prevalent wind was S.W., and the least was E. The most prevalent wind in the year was N.W., which occurred on 113 times, of which 15 were in September, 14 in July, and 13 in both October and November; and the least prevalent wind was S., which occurred on only 13 times during the year, of which 3 were in April and December, 2 in each of the months of February, March, and November, and 1 in August.

(*To face p.* 60.)

MONTHLY METEOROLOGICAL TABLE.

Deduced from observations taken at Jerusalem, by Joseph Gamel, in a garden, well within the city, about 2,500 feet above the level of the Mediterranean Sea, open on all sides.
Latitude, 31° 46′ 40″ N., Longitude, 35° 13′ 30″ E.

Months.	Pressure of atmosphere—corrected to 32° Fahrenheit.				Temperature of the air.							9 a.m.								Wind. Relative proportions of.								Mean amount of cloud.	Rain.	
												Mean reading.			Vapour.															
	Highest.	Lowest.	Range.	Mean.	Highest.	Lowest.	Range.	Mean of all highest.	Mean of all lowest.	Mean daily range.	Mean.	Dry bulb.	Wet bulb.	Dew point.	Elastic force of.	Weight in a cubic foot of air.	Additional weight required for saturation.	Degree of humidity.	Weight of a cubic foot of air.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.		Number of days on which it fell.	Amount collected.
1900.	in.	in.	in.	in.	°	°	°	°	°	°	°	°	°	°	in.	grs.	grs.	°	grs.											in.
January	27·757	27·289	0·468	27·509	60·8	37·0	23·8	52·7	43·0	9·7	47·8	49·7	45·0	40·0	·248	2·8	1·2	70	500	2	6	6	1	0	4	6	6	3·7	6	2·50
February	27·559	27·043	0·516	27·313	64·5	39·0	25·5	55·1	43·6	11·5	49·4	50·8	48·3	45·7	·308	3·5	0·7	84	495	0	2	3	4	2	10	4	3	7·2	17	10·72
March	27·530	27·163	0·367	27·394	81·0	38·0	43·0	63·0	47·0	16·0	55·0	56·0	50·7	45·7	·310	3·4	1·6	68	482	0	4	2	3	2	6	5	9	4·8	11	1·85
April	27·558	27·212	0·346	27·395	86·0	44·0	42·0	72·6	54·3	18·3	63·5	65·9	55·6	47·2	·325	3·6	3·4	51	482	5	3	2	3	3	4	4	6	3·9	1	0·14
May	27·495	27·268	0·227	27·364	96·0	52·0	44·0	78·7	58·8	19·9	68·8	71·5	62·6	54·1	·420	4·4	3·9	54	476	2	1	1	3	0	10	6	8	3·0	1	0·08
June	27·468	27·301	0·167	27·365	97·8	52·0	45·8	83·7	63·5	20·2	73·6	76·8	67·0	60·1	·520	5·6	4·3	57	461	1	2	3	1	0	4	9	10	1·7	0	0·00
July	27·268	27·174	0·094	27·267	93·5	61·0	32·5	84·1	65·7	18·4	74·9	77·8	68·0	61·2	·540	5·8	4·4	57	468	3	2	1	0	0	2	9	14	1·5	0	0·00
August	27·362	27·217	0·145	27·303	92·5	60·0	32·5	84·8	65·7	19·1	75·2	77·3	68·0	61·5	·546	5·9	4·2	58	466	1	3	1	2	1	1	11	11	1·2	0	0·00
September	27·474	27·298	0·166	27·376	98·0	59·0	39·0	80·9	61·8	19·1	71·4	72·4	65·2	59·8	·515	5·6	3·0	66	475	3	1	1	0	0	1	9	15	1·2	0	0·00
October	27·555	27·369	0·186	27·457	88·0	55·0	33·0	79·6	61·8	17·8	70·7	73·5	63·1	55·5	·442	4·8	4·2	53	476	1	2	3	2	0	1	9	13	2·4	2	0·10
November	27·566	27·296	0·270	27·476	80·5	43·0	37·5	66·7	53·0	13·7	59·8	61·9	55·5	50·0	·361	4·1	2·1	66	486	2	5	2	1	2	1	4	13	2·3	3	0·49
December	27·555	27·175	0·380	27·325	75·5	35·0	40·5	58·1	46·1	12·0	52·1	53·4	50·7	48·0	·334	3·8	0·8	82	493	2	3	1	2	3	9	6	5	4·6	11	5·32
Means	27·512	27·234	0·279	27·379	84·5	47·9	36·6	71·7	55·4	16·3	63·5	65·6	58·3	52·4	·407	4·4	2·9	64	480	sum. 22	sum. 34	sum. 26	sum. 22	sum. 13	sum. 53	sum. 82	sum. 113	mean. 3·1	sum. 52	sum. 21·20
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

The total number of times of each wind are shown in the last line of columns 20 to 27 ; those winds less in number than the average of the preceding 18 years were :—

N. by 3
N.E. „ 9
E. „ 4
S.E. „ 1
N.W. „ 4

and those winds greater in number than the average of 18 years were :—

S. by 4
S.W. „ 1
W. „ 16

The numbers in column 28 show the mean amount of cloud in each month : the months with the smallest amount are August and September ; and the largest is February. Of the cumulus or fine-weather cloud, there were 2 instances ; of the nimbus or rain cloud 24 instances ; of these 10 were in February, 4 in March, and 3 in December, and only 5 in the months from April to November ; of the cumulus stratus there were 76 instances ; of the cirro cumulus 71 instances ; of the cirro stratus 34 instances ; of the cirrus 4 instances ; and 154 instances of cloudless skies, of which 21 were in July, and 20 in both August and September.

The largest fall of rain for the month in the year was 10·72 inches, in February, of which 1·48 inch fell on the 13th, 1·40 inch on the 21st, 1·32 inch on the 28th, and 1·25 inch on the 18th. The next largest fall for the month was 5·32 inches, in December, of which 1·87 inch fell on the 20th, and 1·50 inch on the 19th. No rain fell from May 9th till October 5th, making a period of 148 consecutive days without rain. The total fall of rain for the year was 21·20 inches, being 5·11 inches below the average of 38 years, viz., 1861 to 1899. The number of days on which rain fell was 52, being 3 less than the average.

RESULTS OF METEOROLOGICAL OBSERVATIONS TAKEN AT TIBERIAS IN THE YEAR 1900.

By James Glaisher, F.R.S.

The numbers in column 1 of this table show the highest reading of the barometer in each month. The highest appear in the winter, and the lowest in the summer months. The maximum for the year was 31·326 inches, in January, and the next in order 30·877 inches, in December.

In column 2, the lowest reading in each month is shown; the minimum for the year was 30·199 inches, in July, and the next in order 30·206 inches, in August.

The range of readings in the year was 1·127 inch. The range in the morning observations was 1·012 inch, being 0·298 inch greater than the range at Jerusalem.

The numbers in the 3rd column show the extreme range of readings in each month; the smallest was 0·311 inch, in July, and the next in order 0·334 inch, in August; the largest was 0·762 inch, in January, and the next in order 0·521 inch, in February.

The numbers in columns 4 and 5 show the mean monthly reading of the barometer at 8 a.m. and 4 p.m., and in column 6 the amount by which the reading at 4 p.m. is lower than at 8 a.m.; the smallest difference between these two readings was 0·027 inch, in January, and the next in order 0·040 inch, in March; the largest was 0·109 inch, in September, and the next in order 0·102 inch, in June. In England, in January, the readings at 8 a.m. and 4 p.m. are practically the same; in all other months the reading at 4 p.m. is lower than at 8 a.m.; the greatest difference is 0·025 inch, in June. The mean for the year at Tiberias was 0·071 inch, being about four times greater than in England.

The numbers in column 7 show the mean monthly pressure of the atmosphere; the highest was 30·814 inches, in January, and the next in order 30·705 inches, in December; the lowest was 30·382 inches, in July, and the next in order 30·417 inches, in August. The mean for the year was 30·586 inches.

The highest temperature of the air in each month is shown in column 8. The first day in the year the temperature reached 90° was on March 31st; in April it reached or exceeded 90° on

9 days; in May on 15 days; in June on 27 days; in July, August, and September it reached or exceeded 90° on every day; in October on 23 days; and in November on 1 day; thus the temperature reached or exceeded 90° on 168 days during the year. At Jerusalem the temperature did not reach 90° till May 6th, and there were only 19 days in the year on which the temperature was as high as 90°. At Tiberias the temperature was 102° on May 5th, and reached or exceeded 100° on one other day in this month; in June on 10 days; in July on 14 days; in August on 13 days; in September on 2 days; and in October on 1 day; thus on 42 days in the year the temperature reached or exceeded 100°. The highest temperature in the year at Tiberias was 112°·0, on June 7th; at Jerusalem it was 98°·0, on September 1st.

The lowest temperature of the air in each month is shown in column 9. The lowest in the year was 45°·0, in January, on the 2nd; the next in order were 49°, in December, and 50°, in both February and March. At Jerusalem the lowest in the year was 35°·0, on both December 19th and 20th; and there were 18 nights during the year at Jerusalem on which this temperature was as low or lower than 40°.

The yearly range of temperature was 67°·0; at Jerusalem it was 63°·0.

The range of temperature in each month is shown in column 10, and these numbers vary from 25° in February to 47°·0 in June. At Jerusalem the range varied from 23°·8 in January to 45°·8 in June.

In column 11 the mean of all the high day temperatures in each month is shown. The lowest was 66°·2, in January, being 13°·5 higher than that at Jerusalem, the next in order were 68°·4, in February, and 68°·9, in December; the highest was 99°·0, in both July and August, and the next in order were 96°·2, in June, and 94°·9, in September. At Jerusalem the highest were 84°·8, in August, 84°·1, in July, and 83°·7, in June. The mean for the year at Tiberias was 84°·2; at Jerusalem it was 71°·7.

In column 12 the mean of all the low night temperatures in each month is shown. The lowest was 51°·9, in January, and the next in order were 54°, in February, and 55°·9, in March; the highest was 77°·6, in August, and the next in order were 76°·5, in July, and 74°·1, in September. At Jerusalem the lowest were 43°·0, in January, 43°·6, in February, and 46°·1, in December;

the highest were 65°·7, in both July and August, and 63°·5, in June. At Tiberias the mean for the year was 65°·6; at Jerusalem it was 55°·4.

In column 13 the mean daily range of temperature is shown in each month; the smallest was 12°·7, in December, and the next in order were 14°·3, in January, and 14°·4, in February; the greatest was 22°·5, in both April and July, and the next in order were 22°·3, in June, and 21°·6, in May. At Jerusalem the smallest were 9°·7, in January, 11°·5, in February, and 12°·0, in December; the greatest were 20°·2, in June, 19°·9, in May, and 19°·1, in both August and September. At Tiberias the mean daily range for the year was 18°·6; at Jerusalem it was 16°·3.

The mean temperature of the air, as found from the maximum and minimum temperatures only, is shown in each month in column 14; the lowest was 59°·1, in January, and the next in order 61°·2, in February, and 62°·5, in December; the highest was 88°·3, in August, and the next in order were 87°·7, in July, and 85°·0, in June. At Jerusalem the lowest mean temperatures were 47°·8, in January, 49°·4, in February, and 52°·1, in December; and the highest were 75°·2, in August, 74°·9, in July, and 73°·6, in June. At both Tiberias and Jerusalem the mean temperature increased month by month to the maximum in August, then decreased month by month to the end of the year. At Tiberias the yearly value was 74°·9; at Jerusalem it was 63°·5.

The figures in columns from 15 to 30 are imperfect, with the exception of the columns relating to the readings of the wet-bulb thermometer. The omissions are due to the fact that the dry-bulb instrument was destroyed during a strong gale on November 30th. The results for the year are thus rendered incomplete.

The numbers in column 31 show the number of days of rain in each month; the driest months are from April to November, rain falling on only 3 days during these months, viz., once in each of the months of April, October, and November. The greatest number of rainy days was in February 17, and the next in order, 9 in January.

In column 32 the monthly fall of rain is given. The heaviest fall of rain on one day in the months from January to April was 1·45 inch, on February 24th, and the next in order, 1·07 inch, on January 22nd. No rain fell from April 5th till October 14th, making a period of 191 consecutive days without rain. The fall of rain on December 18th was 1·38 inch. The heaviest monthly

(*To face p.* 64.)

MONTHLY METEOROLOGICAL TABLE.

Deduced from observations taken at Tiberias, under the direction of Dr. TORRANCE, at about 652 feet below the level of the Mediterranean Sea, and 30 feet above the level of the Sea of Galilee, open on all sides.
Latitude, 32° 48′ N.; Longitude, 35° 34′ E.

Months.	Pressure of atmosphere—corrected to 32° Fahrenheit.							Temperature of the air.							8 a.m.								4 p.m.								Rain.	
															Mean reading.			Vapour.					Mean reading.			Vapour.						
	Highest.	Lowest.	Range.	Mean at 8 a.m.	Mean at 4 p.m.	Lower reading at 4 p.m. than at 8 a.m.	Mean at 8 a.m. and 4 p.m.	Highest.	Lowest.	Range.	Mean of all highest.	Mean of all lowest.	Mean daily range.	Mean.	Dry bulb.	Wet bulb.	Dew point.	Elastic force of.	Weight in a cubic foot of air.	Additional weight required for saturation.	Degree of humidity.	Weight of a cubic foot of air.	Dry bulb.	Wet bulb.	Dew point.	Elastic force of.	Weight in a cubic foot of air.	Additional weight required for saturation.	Degree of humidity.	Weight of a cubic foot of air.	Number of days on which rain fell.	Amount collected.
1900.	in.	in.	in.	in.	in.	in.	in.	°	°	°	°	°	°	°	°	°	°	in.	grs.	grs.	°	grs.	°	°	°	in.	grs.	grs.	°	grs.		in.
January	31·326	30·564	0·762	30·828	30·801	0·027	30·814	73·0	45·0	30·0	66·2	51·9	14·3	59·1	55·8	49·5	43·6	·285	3·2	1·8	64	554	63·1	54·3	46·7	·320	3·6	2·9	56	545	9	2·95
February	30·845	30·324	0·521	30·610	30·569	0·041	30·590	75·0	50·0	25·0	68·4	54·0	14·4	61·2	59·3	54·2	49·7	·356	4·0	1·7	72	546	63·9	57·1	51·4	·380	4·2	2·3	64	540	17	6·49
March	30·826	30·387	0·439	30·656	30·616	0·040	30·636	90·0	50·0	40·0	72·3	55·9	16·4	64·1	62·7	56·6	51·4	·380	4·2	2·1	68	532	68·6	59·8	52·9	·412	4·4	3·3	57	536	7	1·22
April	30·818	30·362	0·456	30·638	30·565	0·073	30·602	98·0	54·0	45·0	84·3	61·8	22·5	73·0	71·3	63·8	58·1	·474	5·3	3·0	59	533	80·6	64·5	53·6	·410	4·4	6·6	39	523	1	0·07
May	30·696	30·337	0·362	30·572	30·499	0·073	30·536	102·0	63·0	39·0	89·5	67·9	21·6	78·7	76·6	67·4	60·9	·531	5·8	4·1	59	526	86·9	71·8	62·1	·558	5·9	7·6	44	515	0	0·00
June	30·710	30·298	0·412	30·546	30·444	0·102	30·495	112·0	65·0	47·0	96·2	73·9	22·3	85·0	—	71·9	—	—	—	—	—	—	—	72·0	—	—	—	—	—	—	0	0·00
July	30·510	30·199	0·311	30·420	30·344	0·076	30·382	106·0	74·0	32·0	99·0	76·5	22·5	87·7	—	75·3	—	—	—	—	—	—	—	73·4	—	—	—	—	—	—	0	0·00
August	30·540	30·206	0·334	30·443	30·391	0·052	30·417	108·0	73·0	35·0	99·0	77·6	21·4	88·3	—	75·1	—	—	—	—	—	—	—	75·3	—	—	—	—	—	—	0	0·00
September	30·710	30·354	0·356	30·600	30·491	0·109	30·545	101·0	72·0	29·0	94·9	74·1	20·8	84·5	—	71·8	—	—	—	—	—	—	—	73·8	—	—	—	—	—	—	0	0·00
October	30·776	30·435	0·341	30·675	30·577	0·098	30·626	102·0	67·0	35·0	92·5	73·9	18·6	83·2	80·3	65·3	55·1	·434	4·7	6·4	41	542	89·2	71·4	60·1	·521	5·5	9·0	38	514	1	0·08
November	30·855	30·512	0·343	30·731	30·644	0·087	30·688	90·0	56·0	34·0	79·4	63·1	16·3	71·3	69·8	58·9	50·5	·369	4·0	4·0	51	542	76·9	63·2	54·0	·413	4·5	5·5	45	528	1	0·24
December	30·877	30·405	0·472	30·740	30·671	0·069	30·705	79·0	49·0	30·0	68·9	56·2	12·7	62·5	62·4	56·2	50·9	·373	4·1	2·2	66	545	66·4	59·1	53·2	·405	4·5	2·6	63	539	8	3·34
Means	30·791	30·365	0·427	30·622	30·551	0·071	30·586	94·9	59·8	35·1	84·2	65·6	18·6	74·9	—	63·8	—	—	—	—	—	—	—	66·4	—	—	—	—	—	—	sum. 44	sum. 14·39
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32

fall in the year was 6·49 inches, in February, and the next in order 3·34 inches, in December. The total fall for the year was 14·39 inches; at Jerusalem the total fall for the year was 21·20 inches.

REPORT OF RAINFALL AT EL MESHGHARAH, A VILLAGE OF CŒLOSYRIA,

At an elevation of about 3,000 *feet above the Mediterranean Sea.*

By the Rev. GEORGE E. POST, M.D.

Season 1895–96.

October, 1895	2 days	1·170 inches.
November, „	3 „	2·755 „
December, „	9 „	8·002 „
January, 1896	18 „	14·482 „
February, „	12 „	13·600 „
March, „	11 „	9·120 „
April, „	5 „	5·920 „
Totals of the season ...	60 days	55·049 inches

The springs flowed with far more than usual force, and burst out in unaccustomed places.

Season 1898–99.

October, 1898	1 day	0·050 inch.
November, „	9 days	2·480 inches.
December, „	9 „	4·580 „
January, 1899	15 „	4·915 „
February, „	9 „	5·515 „
March, „	8 „	2·900 „
April, „	4 „	1·985 „
May, „	1 day	0·130 inch.
Totals of the season ...	56 days	22·555 inches

These two seasons probably represent a maximum and minimum for that locality.

GOLGOTHA AND THE HOLY SEPULCHRE.

By Sir C. W. Wilson.

I. Golgotha and the Crucifixion.

Christ, according to St. Matthew, was led out for crucifixion to "a place called Golgotha, that is to say, the place of a skull"[1]; Mark has, "the place Golgotha, which is being interpreted, the place of a skull"; and John, "the place called the place of a skull, which is called in Hebrew Golgotha"; Luke, a Greek, writing in Greek for Gentile readers, has simply "the place which is called the skull."[2]

It is clear from the above that Christ was crucified at a known spot, with a distinctive name—"the skull," or "the place of a skull." What was the origin of this curious place-name? Were Christ and the two thieves crucified at Golgotha intentionally or by chance? Can the true position of Golgotha be determined? The answers to these questions have been many and various, but none of them have been so decisive as to command general acceptance. In the following attempt to solve the problems, an effort will be made to lay before the reader a clear statement of the material available for their solution, and of the arguments for and against the more important theories that have been based upon the information at our disposal.

The Name.—Golgotha is the Greek transliteration (the second *l* being dropped out) of the Aramaic *Gulgúlta* which corresponds to the Hebrew *Gulgóleth*. The Greek equivalent of the Hebrew word is κρανίον (*kranion*), the Latin *calvaria*, and the English *skull*. The Bible gives no explanation of the origin of the word, and we have to trust to tradition and to the speculations of Christian writers. In considering the latter it is necessary to bear in mind the relative opportunities possessed by Greek and Latin writers for acquiring local information. Some of the Greek writers were born in

[1] All quotations from the Bible are, unless otherwise stated, from the Revised Version.

[2] Εἰς τόπον λεγόμενον Γολγοθᾶ, ὅς ἐστι λεγόμενος κρανίου τόπος (Matt. xxvii, 33). ἐπὶ Γολγοθᾶ τόπον, ὅ ἐστι μεθερμηνευόμενον, κρανίου τόπος (Mark xv, 22). εἰς τὸν λεγόμενον κρανίου τόπον ὃ λέγεται Ἑβραϊστὶ Γολγοθᾶ (John xix, 17). ἐπὶ τὸν τόπον τὸν καλούμενον κρανίον (Luke xxiii, 33).

Palestine, whilst others lived in the country for many years in close contact with the people. Several of the Latin writers had no local knowledge, and, excepting Jerome and Rufinus, few of them lived for any length of time in Palestine. Allowance must also be made for those shades of thought and feeling which distinguished the Greek from the Roman, and for the differences between eastern and western tendencies and superstitions.

There are three theories with regard to the origin of the place name:—

1. *That it was derived from a tradition that the skull of Adam was preserved in the place.* The earliest known Greek writer to connect Adam with Golgotha is Origen (A.D. 185–253), who lived in Palestine for 20 years[1] (A.D. 233–253), was a personal friend of the Bishop of Jerusalem, and a sound Hebrew scholar. Origen states (1)[2] that there was a Hebrew tradition to the effect that Adam was buried at the Place of a Skull. Athanasius (296–373) says (2) that Christ did not suffer "in any other place, but in the Place of a Skull which the Hebrew teachers declare was Adam's sepulchre." Epiphanius (312–403), who was of Hebrew origin, writes (3) that "Our Lord Jesus Christ was crucified at Golgotha, in no other place than that in which Adam lay buried." Basil of Cæsarea (329–379), giving the Adam legend in a fuller form, states (4) that it was "a prevalent belief preserved in the Church by an unwritten tradition,"[3] that Adam was buried at the Place of a Skull, where Christ was crucified. Chrysostom (347–407) connects (5) Adam's death and burial with the Place of a Skull, and so do Nonnus Panopolitanus (6) (*circ.* 385–440), and Basil of Seleucia (7) (Bishop 448),[4] who calls it a tradition of the Jews. The tradition is not mentioned by Eusebius (260–339), by Cyril of Jerusalem (*circ.* 315–386), or by the historians of the fifth century—Theodoret, Sozomen, and Socrates.

The references to the Adam legend in Latin writers are few. It appears in some verses doubtfully ascribed to Tertullian (8)

[1] Origen had previously visited Palestine in 215 and *circ.* 226.

[2] The numbers refer to the extracts in the appendix.

[3] Theophylact, Bishop of Bulgaria, *circ.* 1070, describes the belief as having come down "from the Holy Fathers" (in "Marc." xv, Migne, "Pat. Gr.," cxxiii, col. 668), and as "an ecclesiastical tradition" (in "Joan." xix, Migne, cxxiv, col. 273).

[4] *See also* Anastasius Sinaita (*d.* 599); in "Hexameron," *lib.* vii; preserved in Latin only (Migne, "Pat. Gr.," lxxxix, cols. 943–945).

(155–230), and appended to his genuine works; and in a letter (9) from Cyprian (Bishop 248) to Pope Cornelius, which is not accepted as genuine by Migne. Ambrose (*circ.* 340–397) writes (10):— "There (at Golgotha) was the sepulchre of Adam," and ascribes (10*a*) a Hebrew origin to the tradition. Jerome (346–420) gives the legend without comment in the letter (11) of Paula and Eustochium to Marcella, but elsewhere he calls it (11*a*) a "stage miracle," and proposes (11*b*) a different explanation of the word Golgotha. There is a notice of it in the (spurious) sixth (12) sermon of Augustine (354–430), but none in the history of Rufinus (345–410). After the fifth century the Adam legend appears to have been greatly enlarged if we may judge from the character it assumes in the writings of the Syrian Bishop, Moses Bar Cepha (13) (tenth century), and of the Patriarch of Alexandria, Said ibn Batrak, or Eutychius (14) (876–939). It appears in its most complete form in the Ethiopic "Book of Adam,"[1] which bears evident traces of having reached Abyssinia *viâ* Egypt. This curious development is purely Oriental and is found in the works of no Western writer.

An essential part of the legend appears to have been that the tomb of Adam was in the centre or navel of the earth; and this position is assigned to Golgotha by writers who do not connect that place with Adam. Thus Cyril of Jerusalem calls it "the very centre of the earth"[2]; Didymus Alexandrinus (309–394), "the centre of the universe"[3]; Victorinus of Poitiers, "the middle of the whole earth" (9*a*); Sophronius (*circ.* 564–637), "the navel of the earth"[4]; and Andreas Cretensis (Archbishop of Crete 675), "the middle of the earth."[5]

It may now be asked whether this Christian tradition, or any part of it, is of Hebrew origin? In the period preceding the Christian era, when the plain narrative of the Bible had become too

[1] A German translation was published in 1853 by Dillmann ("Jahrbücher der Biblischenwissenschaft," von H. Ewald, vol. v; Göttingen, 1853), and an English one, "The Book of Adam and Eve," by Malan, in 1882.

[2] "Catech.," xiii, 28; Migne, "Pat. Gr.," xxxiii, col. 805.

[3] "De Trinitate," *lib.* 1; Migne, "Pat. Gr.," xxxix, cols. 323–326.

[4] "Anacreontica," xx, line 29; Migne, "Pat. Gr.," lxxxvii, col. 3,320. Orat. v, "De Festo S. Crucis," *ib.*, col. 3,313.

[5] "In Exalt. S. Crucis II" (Orat. xi); Migne, "Pat. Gr.," xciii, col. 1,044. *See also* Jerome, in Ezek. v, 5; Migne, "Pat. Lat.," xxv, col. 52; Hilarius, in "Matt.," xxxiii; Migne, "Pat. Lat.," ix, cols. 1,073–1,074.

simple for the tastes of the age, the lives of the three great heroes, Adam, Abraham, and Moses, were "elaborately embellished with fictitious legends." The Christians, when they accepted these Jewish legends, elaborated them with great zeal, and it is now often "impossible to distinguish with any certainty between what is Jewish and what is Christian." Five works on the life of Adam have come down to us, and, although they are unquestionably of Christian origin, they are no less certainly based upon Jewish traditions of greater antiquity. A "Book of Adam," which has unfortunately been lost, is mentioned in the Talmud.[1] Adam, however, is directly connected with Jerusalem by the celebrated Jewish Rabbi Moses ben Maimon or Maimonides (1131–1204), who states (15) that the altar of the Temple stood on the spot whence the dust was taken from which Adam was formed, and upon which Adam, after his creation, built an altar and offered his first sacrifice. On the same spot Noah sacrificed on leaving the Ark, and Abraham erected the altar upon which he laid Isaac. An appropriate termination of the legend would have been the burial of Adam's body at Jerusalem in the ground from which it had been formed. But all Hebrew writers of post-Christian times assert that Adam was buried at Hebron, or, in the words of the "Jewish Encyclopædia" (vol. i, p. 180, *s.v.* Adam), "in the neighbourhood of Paradise, the exact spot being Hebron, near Jerusalem, for the site of the altar in the Temple, whence the dust of Adam was taken, is the gate to Paradise." Jerome, from a wrong reading of Joshua xiv, 15,[2] states that Adam was buried at Hebron, but he does not support his opinion by reference to any Hebrew tradition, as he probably would have done if the existence of such a tradition had been known to him.[3] The belief that Jerusalem was the centre of the earth is of ancient date, and appears to have been derived from Ezekiel v, 5[4]

[1] The Apostolic Constitutions (vi, 16) mention an apocryphal Ἀδάμ; and Epiphanius ("Adv. Haer.," xxvi, 8) notices a Gnostic work, "The Revelations of Adam." For an account of the lost legendary works of Jewish literature, and of the Christian books of Adam, *see* Schürer's "History of the Jewish People," Div. II, vol. iii, pp. 146–148, of English translation, in Clarke's Foreign Theological Library. *See also* arts. "Books of Adam," in Smith and Wace's "Dicty. of Christian Biogy.," and Hastings' "Dicty. of the Bible."

[2] *See* Appendix (11*b* and note).

[3] "Some assert that Adam was buried in two places, first at Kirjath Arba and then in Mount Calvary"; Johannis Nicolai, "De Sepulchris Hebraeorum," p. 118.

[4] "This Jerusalem: I have set her in the midst of the nations, and

(*cf.* xxxviii, 12, and Ps. lxxiv, 12). Thus Josephus says ("B.J." iii, 3, § 5): "The city of Jerusalem is situated in the very middle, on which account some have, with sagacity enough, called that city the navel of the country"[1]; and the Rabbis represent the "stone of foundation," or *aven shetayah*, in the Temple as the centre or nucleus from which the world was founded.[2]

It would thus appear certain that Hebrew tradition connected he first man with Jerusalem, the centre of the earth; and that, more than a hundred years before Constantine built his churches in the Holy City,[3] there was a tradition current amongst the Christians of Palestine that Adam had been buried at Golgotha, the centre of the earth.[4] To this tradition a Hebrew origin was ascribed, and, although we cannot trace it back to Jewish sources, it is extremely probable that the legend was of pre-Christian date. It may perhaps be assigned to the period, alluded to above, when Jewish thought was so much engaged with the past.[5] The tradition, as given by Origen, does not seem to be one that the early Jewish or Gentile Christians would be likely to invent, and no Jew would have originated it after the Crucifixion. On the other hand, if the tradition was of pre-Christian date, it is quite conceivable that the Rabbis, writing after the Crucifixion and the destruction of Jerusalem, may have been led, by motives that need not be specified, to transfer Adam's last resting-place to Hebron, where the Patriarchs were buried. However foolish the Adam tradition[6] may appear to us at the present day, there can be no doubt with regard to its general acceptance, in its simplest form, by the Christian

countries are round about her," "the people that are gathered out of the nations, which have gotten cattle and goods that dwell in the middle (Heb. *navel*) of the earth" (Ezek. xxxviii, 12). "Yet God is my King of old, working salvation in the midst of the earth" (Ps. lxxiv, 12).

[1] *See also* Aristeas, *lib.* de LXX Interpretibus.

[2] Dr. Chaplin in Pal. Exp. Fund *Quarterly Statement*, 1876, p. 23.

[3] After the building of the churches most of the Hebrew traditions attached to Mount Moriah were transferred to the "New Jerusalem"; that relating to Adam stands apart from the others.

[4] May there not, perhaps, be an allusion to this tradition by St. Paul in 1 Cor. xv, 22, 45?

[5] In *Quarterly Statement*, 1901, p. 403, Dr. Schick suggests that the skull was that of Goliath, brought to Jerusalem by David (1 Sam. xvii, 54), buried there by him, and found again when Nehemiah rebuilt the walls.

[6] The tradition is perpetuated by the skull, often accompanied by cross-bones, which is seen beneath the cross, on crucifixes, and in pictures of the Crucifixion.

writers of the first six centuries. Cyril of Jerusalem, who says (16) that Golgotha was so named because Christ, the Head of the Church, suffered there, and Jerome, whose views are discussed below,[1] are the only writers of importance who explain the word without connecting it with the tradition.

(*To be continued.*)

APPENDIX.

Extracts from Early Greek and Latin Writers.[2]

(1) Origen, *in Matt.*—The Place of a Skull is said to have no slight claim to have been the place where He who died for men should have died. I have received a tradition to the effect that the body of Adam, the first man, was buried upon the spot where Christ was crucified, that, as in Adam all die, so in Christ all should be made alive: that in the place which is called the Place of a Skull, that is, the *place of a head*, the head of the human race rose again in the resurrection of Our Lord and Saviour, who suffered there. (Preserved in the Latin translation only.)

In the *Catena* there are the following Greek words in MS. :—

With regard to the Place of a Skull, a Hebrew tradition has come down to us that Adam's body is buried there, to the end that as in Adam all die, even so in Christ all shall be made alive again (Migne,[3] "Pat. Gr.," xiii, col. 1,777).

(2) Athanasius, *De Passione et Cruce Domini.*—Wherefore He did not suffer, He did not hang on the cross in any other place but in the Place of a Skull, which the Hebrew teachers declare was Adam's sepulchre (*ἡ εἰς τὸν Κρανίου τόπον, ὁν Ἑβραίων οἱ διδάσκαλοί φασι τοῦ Ἀδάμ εἶναι τάφον*): for there they say he was buried after the curse. Now, if this be so, I admire the appropriateness of the place, for it was needful that Christ, when He was renewing the old Adam, should suffer in that place, that by taking away his sin He might set all mankind free from it. And whereas God said to Adam, "Dust thou art, and unto dust shalt thou return" (Gen. iii, 19), He came hither to the end that he might find Adam there and free him from that curse; that instead of that "Dust thou art, and unto dust thou shalt return," He might say unto him "Awake, thou that sleepest, and arise from the dead, and

[1] In (2), and *see* Appendix 11*b*.

[2] The translations, except where otherwise stated, are by Mr. Aubrey Stewart, M.A.

[3] The references to Migne are for those who wish to consult the original texts.

Christ shall give thee light"; and, again, "Rise, come and follow Me," that thou mayest no longer lie in the earth, but mayest ascend to the heavens. Indeed, it was necessary that when the Saviour rose, Adam, and all the seed of Adam, should rise with him (Migne, "Pat. Gr.," xxviii, col. 208).

(3) Epiphanius, *Adversus Haereses* (lib. 1, tom. iii, xlvi, 5).—Wherefore a man of understanding may wonder that, as we have been taught by the Scriptures, Our Lord Jesus Christ was crucified at Golgotha, in no other place than that in which Adam lay buried. For Adam, when he was cast out of Paradise, dwelt for a long time over against it. Then a long time afterwards he removed to the place Jerusalem, of which I have spoken, and there, when he died, he was buried in Golgotha. From this the place itself has rightly received its name, so that when interpreted it may be called the Place of a Skull. There is nothing to be seen in the place resembling this name; for it is not situated upon a height that it should be called [the Place] of a Skull, answering to the place of the head in the human body; neither has it the shape of a lofty watchtower, for it does not even rise above the places round about it (*ὅθεν, εἰκότως τὸ ἐπώνυμον ὁ τόπος ἔσχε, κρανίου ἑρμηνευόμενος τόπος, ἧς ὀνομασίας τὸ σχῆμα τοῦ τόπου ἐμφέρειάν τινα οὐχ ὑποδείκνυσιν· οὔτε γὰρ ἐν ἄκρᾳ τινὶ κεῖται, ἵνα κρανίου τοῦτο ἑρμηνεύηται, ὡς ἐπὶ σώματος κεφαλὴ τόπος λέγεται, οὔτε σκοπιᾶς· καὶ γὰρ οὔτε ἐν ὕψει κεῖται παρὰ τοὺς ἄλλους τόπους*). Indeed, over against it stands the Mount of Olives, which is a higher hill than it: but the highest is the mountain of Gibeon, which stands eight miles away from it. Lastly, even that hill which once stood on Mount Sion, but at the present day has been cut down, was higher than Golgotha on that spot. Whence then did it obtain the name of the Place of a Skull? No doubt because there the bare skull of the first man was discovered and his remains dug up, for this cause it was called the Place of a Skull. In this place our Lord Jesus Christ was lifted up on the Cross, and by the water and blood which flowed from his pierced side typified the whole scheme of our salvation . . . . (Migne, "Pat. Gr.," xli, col. 844).

(4) Basil (of Cæsarea), *Com. in Is.*, v, §141.—There was a prevalent belief, preserved in the Church by an unwritten tradition, to the effect that Adam was the first inhabitant of Palestine, who fixed his abode there after he had been driven out of Paradise (Gen. iii, 23), that he might compensate himself for the good things which he had lost. This land therefore received the first man who died, for it was there that Adam paid his debt. Wherefore the bone of his skull, when bared of flesh, appeared as a new and strange sight to the men of that age. Now as they placed his skull in this place, they called the place itself the Place of a Skull (*καὶ ἀποθέμενοι τὸ κρανίον ἐν τῷ τόπῳ, κρανίου τόπον ὠνόμασαν*). It is probable that this sepulchre (*τὸν τάφον*) of the first of all men was well known, so that after the flood this tradition about it was prevalent. For this cause the Lord, perceiving there the first

fruits of human death, Himself suffered death in the place called the Place of a Skull, to the end that at the place where men's death first began there also life should begin its reign, so that as death had dominion over Adam, so by the death of Christ he should lose his power (1 Cor. xv, 22) (Migne, "Pat. Gr.," xxx, col. 348).

(5) Chrysostom, *in Joan.*, xix, 16–18 ; *Hom.*, 85.—"*And he came to the place of a skull.* Some say that Adam died there, and there lieth ; and that Jesus in this place where death had reigned, there also set up the trophy" (*i.e.*, the Cross) (Migne, "Pat. Gr.," lix, col. 459 ; Pusey, "Library of the Fathers," Chrysostom, ii, 756).

(6) Nonnus Panopolitanus, *Paraphrasis in Joan.* xix.—

and Jesus bearing His cross,
Willingly went on His way, undaunted in mind, to His doom,
Till he arrived at the place which is called the Place of a Skull,
Bearing the name on its brow of Adam the first of men,
Golgotha called in the Syrian tongue.

—(Migne, "Pat. Gr.," xliii, col. 901).

(7) Basil (of Seleucia), *Oratio* xxxviii, 3.—According to the traditions of the Jews, it is said that the skull of Adam was found here, and that this was known to Solomon through his great wisdom. This, they say, is the reason why this place was called "the Place of a Skull" (Migne, "Pat. Gr.," lxxxv, col. 409).

(8) Tertullian, *Adversus Marcionem*, lib. ii, cap. 4.—

There is a place, now Golgotha, once Calvary,
Place of a Skull named in the earlier tongue ;
Here is earth's centre, here was victory won ;
Here, ancients say, was found a mighty head,
Here, we have heard, the first man lay entombed ;
Christ suffered here, his blood bedewed the earth,
So that old Adam's dust, with blood of Christ
Commingled, by that saving flood might rise.

(Appendix I to the genuine works of Tertullian. Migne, "Pat. Lat.," ii, col. 1,067.)

(9) Cyprian, *Ad Cornelium Papam de Cardinalibus Operibus Christi.* "De Resurrectione Christi."—Nor is it right that in these days we should speak of sad things, but as it was appointed to the children of love (1 Chron. vi, 31–33) that they should ever sing and prophesy merrily, and all the Psalms which bear their names tell of joy, and threaten no evil, so we who belong to Christ, with whose blood we believe that Adam's skull was sprinkled, as ancient tradition tells us that he was buried beneath the place whereon the Lord's cross was set up, being sanctified by the flowing of his blood, let us make merry and rejoice in the Lord (S. Caecilii Cypriani Ep. Carthaginensis et Mart. Opera, ed. Baluzius, p. 133).

(9*a*) *Hymnus Victorini Pictaviensis, De Cruce Domini.*—(Wrongly ascribed to Cyprian.) There is a place which we believe to be the middle of the whole earth. The Jews call it in their own language Golgotha (*op. cit.*, ed. Baluzius, p. 159).

N.B.—These two passages are in the editions of Baluze, and of Oxford, but not in Migne, who does not accept them as genuine.

(10) Ambrose, *Epist.* 71, § 10. *To Horontianus.*—There (at Golgotha) was the sepulchre of Adam ; that Christ by His cross might raise him from death. Thus, where in Adam was the death of all, there in Christ was the resurrection of all (Migne, "Pat. Lat.," xvi, col. 1,243 ; Pusey, "Library of the Fathers," Epistles of St. Ambrose).

(10*a*) *Expositio Evang. sec. Luc., lib.* x.—The place of the cross was either in the midst, that it might be easily seen of all ; or above the burial place of Adam, according to the Hebrews. Indeed it was fitting that our spiritual life should have its beginning in the place wherein death first came into the world (Migne, "Pat. Lat.," xv, col. 1,832, § 114).

(11) Jerome, *Ep. Paulae et Eustochii ad Marcellam* (Ep. 46 (17), written about A.D. 386).—§ 3. Finally, to refer to an entirely different subject, let us go back to more ancient times. In this city, nay in this very place, Adam is said to have dwelt there, and to have died there. Whence the place wherein Our Lord was crucified was called *Calvary*, because it was there that the ancient man's skull was buried, to the end that the second Adam, that is to say, the blood of Christ flowing from the cross, might wash away the sins of Adam the first and first-formed man who lay there ; and that then the words of the apostle might be fulfilled, "Awake, thou that sleepest, and arise from the dead, and Christ shall give thee light" (Ephes. v. 14) (Migne, "Pat. Lat.," xxii, col. 485).

(11*a*) *Com. in Ephes.* v, 14.—I remember to have heard some one discoursing in church upon this passage, and he tried to please the people by telling them of a stage miracle, a matter never heard of before, saying, "This testimony applies to Adam who was buried in the place Calvary, where the Lord was crucified. This place was called Calvary because the head of the ancient man was buried there ; when therefore at the time when the Lord was crucified, he hung over his sepulchre, this prophecy was fulfilled which saith, 'Arise Adam, thou that sleepest, and arise from the dead'" (Migne, "Pat. Lat.," xxvi, col. 526).

(11*b*) *Com. in Matt.* xxvii, 33.—I have heard some one explain that the place Calvary in which Adam was buried, was so named because there the head of the ancient man was placed, and that this was what was meant by the apostle when he said, "Awake, thou that sleepest, and arise from the dead, and Christ shall give thee light." This is a popular interpretation and pleasing to the ears of the people, but nevertheless it is not a true one, for outside the city and without the gate

there are places wherein the heads of condemned criminals are cut off, and which have obtained the name of Calvary, that is, of the beheaded. For this reason the Lord was crucified there, in order that the banner of his martyrdom might be set up in the place which had before been the field of the condemned. And as for us he bore the reproach of the cross, was scourged and crucified, even so for the salvation of all men he was crucified as a criminal among criminals. But if any one should argue that the Lord was crucified on that spot to the end that His blood might run down on to the tomb of Adam, let us ask him why the two thieves were crucified in the same place? From this it is evident that Calvary does not mean the sepulchre of the first man, but the place of the beheaded, and that where sin abounded, grace might much more abound (Romans v, 20). Now we read in the Book of Joshua (xiv, 15)[1] the son of Nun, that Adam was buried at Hebron, which is Arba (Migne, "Pat. Lat.," xxv, col. 209).

(11c) *Onomasticon, s.v. Arboc.*—Arboc . . . . that is four, because three patriarchs, Abraham, Isaac, and Jacob, are buried there, and great Adam, as is written in the Book of Joshua (xiv, 15), though some think that he was buried in the Place of a Skull (Migne, xxiii, col. 862).—[C. W. W.]

(12) Augustine, tom. v, *Sermones Suppositii*, Sermo vi (lxxi).—§ 5. Hear also another mystery. St. Jerome, the Elder of the Church, has recorded (in "Marc.," xv) that he learned for a truth from the ancients and the older Jews, that Isaac was offered at the place where the Lord Christ was afterwards crucified. . . . . It has also been handed down by ancient tradition that the first man Adam was buried on the very spot where the cross was set up, and that place was therefore called Calvary, because the head of the human race is said to have been buried there. And this belief, my brethren, is not unreasonable, for the physician is raised up on the place where the sick man lay down. It was right also that the divine pity should bow itself down on the spot where human pride had fallen, and that we should believe that while that precious blood actually deigned to fall upon the dust of the ancient and sinful man, it should have wrought his redemption (Migne, "Pat. Lat.," xxxix, col. 1,751).

(13) Moses Bar Cepha, *De Paradiso*, i, cap. 14.—Adam, after the loss of Paradise, first lived in Judæa, and, after he had travelled in many countries and dwelt in many places, came towards the end of his days to Mount Jebus, and was buried there. Now, Jebus is certainly Jerusalem. . . . . [When Noah at the approach of the Deluge entered

[1] This well-known error of Jerome's, which also occurs in the "Onomasticon," *s.v.* Arboc, is due to a misreading of the Hebrew text of Josh. xiv, 15. The Vulgate has "Adam maximus ibi inter Enacim situs est," where the Revised Version reads, "*which Arba was* the greatest man among the Anakim."

the ark with his sons], he took the bones of Adam with him, and when he left the ark after the Flood he distributed the bones amongst his sons. He also parted the world amongst them, giving to each his portion to dwell in. Thus he gave Adam's skull to his eldest son, Shem, and allotted to him the land of Judæa ; and so it happened that Shem, when he came to Judæa (his inheritance), reburied the skull of Adam, which he had received at the distribution of the bones by his father, at the sepulchre of Adam, which was then in existence. . . . . If that be the case, then it is true that the skull of Adam was buried at Jebus, *i.e.*, Jerusalem, and that the cross of Christ was set up above it. It is also certain that Noah brought with him the bones of Adam from that other land, and that when he came into this our country, he gave the head to his firstborn, Shem, who, when he came to Jebus, his inheritance, buried it (Migne, "Pat. Gr.," cxi, cols. 497, 498).—[C. W. W.]

(14) Eutychius, *Annales*, p. 19.—Adam, when he felt that he was about to die, called together his son Seth, and Enosh, the son of Seth, and Kenan, the son of Enosh, and Mahalalel the son of Kenan, and taught them what they should do, saying to them :—Let this be a law for all your children. When I am dead, embalm my body with myrrh, aloes, and cassia, and lay it in the cave *el-Kanûz :* and whosoever of your sons shall be living at the time when you determine to leave the confines of Paradise, let him bear my body with him and bury it in the middle of the earth, for from thence shall come my salvation and the salvation of all my children. . . . . So when Adam died, his son Seth embalmed his body, according to his command, bore it to the top of the Mount, and buried it in the cave *el-Kanûz*. . . . .

P. 44.—[Noah, when at the point of death, thus instructed Shem.] See that thou take Adam's body out of the ark, unknown to everyone, and then take store of bread and wine for a journey and set forth, and take with you Melchizedek, the son of Peleg, and lay the body in the place which the angel of the Lord shall show you. . . . . The angel of the Lord shall go before you until you come to the place where you are to bury Adam, and you may know that spot to be the middle of the earth. . . . .

P. 48. So Shem did as his father Noah commanded him ; he went into the Ark by night and bore thence the body of Adam, telling no man what he was doing. . . . . Now when Shem and Melchizedek, bearing with them Adam's body, set forth on their way, the angel of the Lord met them, and never departed from them until he had brought them to the midst of the earth and shown them the place. When Adam's body was laid upon it, it opened of its own accord, and then, when the body was within it, it closed up again. Now the name of this place is *el-Jaljalah* (Migne, "Pat. Gr.," cxi, cols. 911, 917, 918).

(15) Maimonides, *in Beit Abachria*, *cap.* 2.—The site of the altar was conveniently situated, and its position was never changed, as it is written, "this is the burnt offering of Israel" (1 Chron. xxii, 1). In the

place of the sanctuary our father Isaac was bound, according to the command, "get thee into the land of Moriah" Gen. xxii, 2). It is also said that Solomon built the house [of the Lord] there, on the mount (1 Kings vi, 14). Now, it is a common tradition (*traditio in omnium manu*) that the place in which David and Solomon built a resting place for the ark was the same spot as that upon which Abraham built an altar and bound Isaac upon it. It was also the place upon which Noah built an altar after he left the ark; and this was the same altar upon which Cain, Abel, and Adam, after his creation, offered a first sacrifice, and from the dust of that spot Adam was formed. Hence the wise ones say, Adam was created from the place of his atonement (*e loco expiationis suae*). (From Fabricius, "Codex Pseudepigraphus Vet. Test.," 2nd ed., vol. i, cap. 29, p. 73.)—[C. W. W.]

(16) Cyril (of Jerusalem), *Cat.*, xiii, 23.—Now, Golgotha is interpreted "the Place of a Skull." Who were they then, who prophetically named this Golgotha, in which Christ the true Head endured the cross? As the apostle says, "who is the image of the invisible God" (Col. i, 15); and, after a little, "and He is the Head of the body, the Church" (Col. i, 18); and again, "the Head of every man is Christ" (1 Cor. xi, 3); and again, "who is the Head of all principality and power" (Col. ii, 10). The Head suffered in the "Place of the Skull." O wondrous prophetic adaptation! The very name almost reminds thee, saying: Think not of the Crucified as of a mere man; He is *the Head of all principality and power*. That Head which was crucified is the Head of all power, and has for His Head the Father; for the *Head of the man is Christ*, and *the Head of Christ is God* (1 Cor. xi, 3). (Migne, "Pat. Gr.," xxiii, cols. 800, 801; Pusey, "Library of the Fathers," Cyril's Catechetical Lectures.)

REMARKS ON THE JULY, 1901, "QUARTERLY STATEMENT."

P. 275.—The journey of my learned countryman, Professor Felix Bovet, to the Holy Land did not take place in 1875, but in 1858. The first edition of the "Voyage en Terre-Sainte" was published in 1861. Canon MacColl's mistake is easily explained by the fact that he has used the seventh edition, 1876. It must be acknowledged that the beginning of the narrative is rather misleading, but see p. 27 of the seventh edition. I do not think that a careful perusal of Professor Bovet's deservedly popular book would strengthen the assertion that this traveller "went to Jerusalem . . . . on purpose to investigate the question on the spot, having previously compared

the arguments for the old site and the new respectively." In his introduction Professor Bovet explains differently the purpose and motives of his journey; and, moreover, when he mentions what is now called "the new site" (p. 229, *cf.* p. 163), he clearly shows that the idea of locating there the scene of the crucifixion occurred to him during his visit in Jerusalem.

P. 303.—Canon Gell gives a very useful enumeration of "some of the essentials for the identification of the true sepulchre." This list is interesting and almost complete. An indication might be added, which is not perhaps without some importance. St. Mark (xv, 21) and St. Luke (xxiii, 26) mention both that Simon of Cyrene was "coming from the country." This remark seems to suggest that Simon was seized either outside the walls or at the gate; in the interior of the town it would be unmotivated. And does not the fact that, passing the gate or having passed it, the soldiers want a man to carry the cross show that the place of the crucifixion was not in the immediate proximity ?[1]

P. 308.—I have not seen yet Father Barnabé's book, but I am struck by the words ". . . . the spot on the ridge of Olivet which is now called *Viri Galilei* or *Mons Galilea*." These two traditional expressions have quite a different origin, and ought not to be identified. *Viri Galilei* has its origin in Acts i, 11: "Ye men of Galilee, why stand you looking into Heaven?" and is necessarily connected with the scene of the Ascension. *Mons Galilea* proceeds from the passage Matt. xxviii, 16: "But the eleven disciples went into Galilee, unto the mountain where Jesus had appointed them." Those who try—in my opinion without success—to identify this *Mons Galilea* with a portion of Mount Olivet, as R. Hofmann has done recently ("Galilaea auf dem Oelberg," Leipzig, 1896), place it on the northern extremity of the ridge, in the neighbourhood of Mr. Gray Hill's well-known country house.

LUCIEN GAUTIER.

GENEVA, *October*, 1901.

[1] I wish to state that I am not an upholder of "the new site," nor a determined adversary of the traditional site; but, as certainly many others do, I want more light on this difficult subject.

REMARKS ON THE OCTOBER, 1901, "QUARTERLY STATEMENT."

THE coins found by Professor G. A. Smith at Tell esh-Shihâb and at Banias (*Quarterly Statement*, October, 1901, p. 350) evidently come from the Low countries. The first is interesting, as being an example of the local currency of the town of Campen, which struck such "money of convention" from the fifteenth to the seventeenth century. The inscription on the obverse should be given as MO(neta) ARG(entea) CIVI(tatis) BEL(gicae) CAMPEN(sis). The second is a specimen of the coinage of West Friesland; the inscription, no doubt, is MO(neta) ARG(entea) PRO(vinciae) CONFOE(deratae) BELG(icae) WEST(frisiae).

The specimens of recent foreign coinages to be found in Palestine afford a rather interesting study; though, as the majority of the pieces are large silver coins worn by Fellah women, it is generally impossible to obtain more than a passing glimpse at the individual examples, and a considerable familiarity with the various types is necessary to identify them. The only coin I have seen that can compare in interest with Professor Smith's was a seventeenth century Polish piece: this also had been perforated for suspension. Perhaps the half-crown of George III of Britain, which I once noticed in a woman's headdress, was a little unexpected. But one of the most curious discoveries of this kind that I have heard of was a battered English halfpenny of William III, dug up somewhere near Jerusalem. It would be interesting to know the history of the wanderings of this relic.

R. A. S. M.

THE BIBLICAL CUBIT—A NEW SUGGESTION.

AFTER the meeting of the Executive Committee on November 5th, the members present gave a private interview to the Rev. W. S. Caldecott, in order that he might explain to them the construction of a new model of the Tabernacle which he had constructed.

Mr. Caldecott stated to the members of the Committee that the model had been made under the governing influence of a new theory of the biblical cubit, at which he had arrived. He referred

to Fergusson's statement, in Smith's "Dictionary of the Bible" (article, *Temple*), that the question as to how the curtains were applied as a covering to the Tabernacle had hitherto (1863) proved a stumbling block to restorers. He did not think that Fergusson's solution of the difficulty was a satisfactory one, as, in his restoration, both sets of curtains (*i.e.*, that containing ten, and that containing eleven curtains) were hung over the centre ridge-pole; whereas one of these sets was manifestly meant to cover the Tabernacle, and the other one the tent of the Tabernacle.

Another objection taken to Fergusson was based upon his representation of the completed Tabernacle (Fig. 4), showing *six* pillars in its front elevation (besides the centre tent pole), whereas the text twice states that the number was *five* (Exodus xxvi, 57, and xxxvi, 38).

To meet these difficulties it was proposed to apply cubits of different lengths, each being applied to its own specific department, of construction.

The lecturer stated that he accepted Colonel Conder's idea of there having been three cubits in use amongst the Hebrews, as published in 1875, in the "Transactions of the Society of Biblical Archæology," vol. iv, pp. 121–5. He also accepted Sir Charles Warren's conclusion that the length of one of these three cubits was 18 inches, as stated in the "Jerusalem Memoir" (P.E.F.).

His own addition to these opinions was that the 18-inch cubit was the largest of the three, and consisted of five palm-breadths. This, he thought, was the "great cubit" of Ezek. xli, 8, which was ordinarily used as a surveyor's cubit or land measure. In a few special cases—all of which are so distinguished—it was used in the specification of Ezekiel's temple plan. In every other case its sole application was to ground areas, the two courts of the Tabernacle being delimited by it.

There is evidence in Ezekiel that the cubit next in size to the great cubit was one of an hand-breadth less in length (Ezek. xl, 5, and xliii, 13). By the suggestion that the great cubit consisted of five palms, or 18 inches, the conclusion will be easily arrived at that each palm was 3·6 inches, and that the medium cubit had a length of 14·4 inches.

This was the cubit used throughout the Tabernacle erection, with two exceptions. One of these has already been referred to as covering the site. The other involved the use of a still smaller

cubit of three palms (= 10·8 inches), which was used in the measure of all gold work, whether as material or as ornament. In the Talmud it is called "the cubit of the vessels" of the sanctuary, as the one next in size to it (larger) is called "the cubit of the building" (Menakhoth, 97A, cited in "Jerusalem" volume, p. 241). It is this small cubit—for which an appropriate modern descriptive name would be "the goldsmith's cubit"—that it is supposed the ten curtains of the Tabernacle were, in construction, measured by. To them is given, in Exodus xxvi, 2, a width of four cubits, and a length of 28 cubits. Being embroidered with figures of cherubs worked in gold thread (as the eleven goat's-hair curtains were *not*) they naturally fell under the goldsmith's rule. When conjoined, their width would thus be 40 small cubits, equal to 30 medium cubits. Thirty cubits (medium) being the length of the Tabernacle boards when placed in position, it will be seen that the ten curtains exactly enclosed it on its upper side. The union of the two sets of five curtains, in the middle, would allow for the protrusion there of the second tent pole of the three which supported the ridge bar.

By the adoption of this allocation of cubits Fergusson's proposed place for the ten curtains over the ridge pole may be set aside. The length of each curtain being $25\frac{1}{5}$ feet—made up of 28 cubits of three palms each—its drapery, when hung over the Tabernacle boards, would keep it some 6 feet from the ground, whereas Fergusson's plan makes the lateral extension of the two sets of curtains nearly the same, or as 28 : 30.

The treatment required by the eleven curtains in one of their dimensions, viz., the width, is wholly different. Being woven by the medium cubit of $1\frac{1}{5}$ feet, and each of the eleven being four cubits wide (Exodus xxvi, 8), we have a total width of curtain, when conjoined, of $52\frac{4}{5}$ feet. Of the eleven, one was deducted from this extension by being hung, in halves, over either end of the Tabernacle tent. We then have 48 feet of curtaining to deal with. The application of the medium cubit to the Tabernacle boards will show that the Holy of Holies was a cube of 12 feet, and that the Holy Place had a length of 24 feet, and a width and height of 12 feet each. To these, on the authority of Josephus, must be added a third area, to which, by analogy, must be given a size identical with that of the area of the Holy of Holies. The references to Josephus may be seen in "Antiquities," III, 6, § 4, and III, 7, § 7, and are as clear as is necessary.

In these three areas—two of 12 feet square and one of 24 feet in length—we have the space required to be covered in by the 48 feet of which the goat's-hair curtains consisted, the third area being defined by the position of the five pillars.

Other evidence, on the same behalf, was produced by Mr. Caldecott, who claims to have established that there were three cubits of the respective lengths of $\frac{9}{10}$, $\frac{12}{10}$, and $\frac{15}{10}$ of an English foot, the first of which was used exclusively for gold and silver work, the second for building purposes, and the third for measuring areas only.

THE SAMARITAN PASSOVER.

By the Rev. John E. H. Thomson, D.D.

On Monday, May 2nd, 1898, a party of us—my wife and myself, accompanied by two young ladies—started from Nazareth for Nâblus to see the Samaritan Passover. I need not spend time detailing our journey across the plain of Esdraelon, our stay in the native *hôtel* in Jenin, or our visit to Sebaste. It is a road well known. I would, however, like to make a passing note on 'Ain Jalûd, Gideon's fountain, where we lunched on our first day. The name certainly means the well of Gilead; and as certainly Gilead, as we find it in later history, was across the Jordan. Might I venture to suggest that Gilboa originally was called Gilead, hence we find it said in Judges vii, 3, "Let him that is fearful or afraid depart out of Mount Gilead." מֵהַר הַגִּלְעָד. The suggestion of Professor G. A. Smith that Gilead here may be a misreading for Gilboa does not seem probable, as the mountain to the south of Mount Moreh, out of which the well of Harod sprang, was well known later as Mount Gilboa; the tendency would rather have been to have changed Gilead into Gilboa than the reverse. 'Ain Jaluk, a variant found in the Jerusalem itinerary, is due to mishearing. Another note I would make on Fendakûmîyeh—a name generally understood to be equivalent to *πέντε κώμαι*. The modern Arabic equivalent of the Greek π is ب, as Boutros and Boulos. Is it possible that in some cases the ancient Greek softened π into an f as the modern Greek softens β into v? Another example of the same change is Fahil (Pella); but on the other hand we have Baneas from Panias.

We arrived about sunset on Tuesday evening at the Latin Convent Nâblus. We had been informed that on the evening of Thursday, May 5th, the Passover was to be killed, so we had expected to have a free day before the Passover to climb Mount Ebal. However, when we were dismounting we heard the porter muttering to himself, as if explaining

our presence, *Na'am l'yidhbachu el kharoof bukra* ("Yes, they kill the sheep to-morrow"). I thought he must have made a blunder, but I found he was right, and that our informant had been mistaken.

In the evening of the day of our arrival we called on Mr. Falscheer, and found quite a number of guests in his house, all intent on being present at the celebration of the next evening. Arrangements were then made as to procedure on the following day, and we were put under the guidance of the *shamas* or deacon of the church, who was also teacher of the school. The portion of Nâblus inhabited by the Samaritans is toward the north-west of the city, and seemed very confined. We cannot say that we entered the Synagogue—we were not allowed to go beyond the threshold; it was a small dark, richly-carpeted apartment. Formerly the Samaritans had several Synagogues in Nâblus; now all but this one have been wrested from them by the Moslems, and transformed, most of them, into mosques. We were shown the different rolls, including the famous one attributed to Abishua, the great-grandson of Aaron.

We understood that, by the time we arrived at Nâblus, all the Samaritans had already migrated to the top of Mount Gerizim. Mr. Mills and Dr. Petermann say that this migration begins on the morning preceding the Passover. Whether on that morning or earlier, the whole Samaritan community, except those ceremonially unclean or in the very article of death, had gone or had been carried to the top of the Sacred Mountain. Dean Stanley, in his "Sermons in the East," and Mr. Mills, in his "Modern Samaritans," mention that the Samaritans, after having been deprived of it for 40 years, regained the right of celebrating the Passover on Mount Gerizim through the influence of Mr. Finn, then English Consul at Jerusalem. During the interval they had held the feast in their houses—as do the Jews—though I understand that they sacrificed the lambs throughout the whole period, which the Jews have not done since the destruction of the Temple in Jerusalem.

About three o'clock on Wednesday afternoon we mounted our horses at the convent gate and joined the party from Mr. Falscheer's on the western outskirts of Nâblus. Keeping to the outskirts, we passed close beside the now deserted Samaritan quarter. We then turned more to the north till we came to a large fountain that seems to supply the northern part of Nâblus. We were directed to a bridle-path much like several that I have seen in the Scottish Highlands made by cattle, only the rough limestone boulders over which the horses stumbled were larger and more irregular than one ever sees intruding on a bridle path in Scotland. At the beginning, on each side, were green orchards of oranges, pomegranates, figs, &c., but we had not gone far till we had orchards only on the left hand, and then we got above them altogether. After a ride of about an hour and a half, we came to the top of the hill and looked down on the Samaritan encampment, perhaps a score of yards below the level on which we stood and about a quarter of a mile away. It occupied a slight depression on the hill-top; rising to the east of this was a slight elevation, which formed the brow of

the mountain towards the plain of Mŭkhnah. Away beyond were the mountains of Gilead with Jebel Osh'a for centre ; to the south of this were the mountains of Moab, to the north the Jaulan, and eastward from it, dimly seen, was the famous Jebel ed Druz. To the south of this depression were mounds that suggested ruins, and at the edge of the mountain the *wely* of a departed Moslem Sheikh—Sheikh Ghanem—a square building surmounted by a dome. To the west stretched the sea, and northward lay, across the narrow plain of Shechem, Mount Ebal. In the centre of the slight depression stood the twenty-nine tents which formed the Samaritan encampment. At a little distance to the south-east stood a solitary tent, the purpose of which we learned afterwards. The twenty-nine tents were arranged in two curved lines facing each other. Dr. A. R. McEwan, in an article on the Samaritan Passover which appeared in "Good Words," January, 1894, speaks of "the tabernacle" in the encampment. I saw nothing of the kind, and none of the authorities I have consulted refer to it. He may have meant by this term the high priest's tent, but he speaks as if part of the service was held in it. All I can say is it was not so on the occasion of my visit. Strange as it may seem, this encampment, small though it was, made one think of the scene in the desert with the innumerable tents of the house of Israel. The tents in the wilderness would certainly not be like those before us, which seemed much like those used by ordinary tourists. Everything, I may remark, looked bright and clean. Not impossibly the Samaritans may have the habit, like the Jews, of renewing garments and household utensils at Passover.

The day on which we were on the top of Mount Gerizim was the Moslem feast of the Greater Bairam. As a result of this there were on the top of the mountain a great many Moslems in a high state of festive excitement, and giving us rather more attention than was quite agreeable. I have an idea that it is possible that some of the ceremonies of the Passover were omitted or modified in consequence of there being so many excited Moslems on the mountain. Another result was the presence of a large contingent of Turkish police, who had been hired by the Samaritans to protect them. We in turn, by giving them for *baksheesh* two medjeedies—about seven shillings—were taken under their protection. I can say that the police, on their part, carried out their share of the bargain, cracking the crowns of their co-religionists with great apparent gusto. The strokes must have been somewhat serious, as the men were strong and the cudgels formidable.

I went to visit the foundations of the ancient temple, but found all careful investigation impossible in consequence of the presence of these Moslems. When I attempted to make a rough sketch, they crowded round me so as to eclipse everything. However, we walked round the tomb of Sheikh Ghanem, and had a most enchanting view. While I complain of the crowd, I cannot honestly say that it was worse than a Scotch mob would have been in similar circumstances. When looking down on the plain two objects naturally drew our attention most, the

green mound of 'Askar, which almost certainly marks the site of Sychar; and, nearer the mountain, the tomb of Joseph, and Jacob's well. We felt ourselves indubitably on sacred ground; this mountain on which we were standing was that seen by our Lord when He said, "Neither on this mountain nor yet in Jerusalem shall men worship." In the narrow valley of Nâblus Joshua had called together the elders of Israel to meet him. In that valley, too, had the Kingdom of the Ten Tribes been rent from Rehoboam. In ordinary circumstances we should have been shown the stones which Joshua took out of the Jordan, the steps of Adam out of Paradise, and the place where Abraham offered up Isaac, all which Samaritan tradition places on the top of Mount Gerizim, but the presence of the excited crowd of Moslems rendered this impossible.

While we were engaged in scrambling about the Sheikh's tomb, we observed smoke rising from a little elevation to the north-east of the tents, and turned our steps towards it. When we reached the place we found a small number of Samaritans attending two fires. One was in a shallow trench, and on it were placed two copper cauldrons full of water. Not far from this fire we saw smoke welling out from a deep pit. The pit was a yard or so wide at the top, and seemed lined with masonry. A quantity of brushwood had been thrown into it and set on fire; this fire was replenished with fuel continually during the services. The purpose of the fire was not obvious at the moment. Dr. McEwan, in the article to which I have referred, mentions the presence of women and children at this point in the proceedings. I did not see any. Petermann, indeed, says they were expected to remain in their tents during the celebration, and Mills confirms this. Otherwise their absence might be accounted for by the number of Moslem youths gathered on the mountain.

Away to the south of this were assembled a larger number of the Samaritans. I did not count them, but to my eye there seemed between twenty and thirty. Petermann says there were twelve men besides the high priest, and that these represented the tribes of Israel. Mills says "some of the elders." When Dean Stanley was present the numbers were indefinitely large, he distinguishes "fifteen of the elder men besides six youths" from "the majority" of the worshippers. From these variations it is evident that there is nothing symbolic in the number.

These men stood in a semicircle, in the centre of which was the fragment of an ancient column.[1] Beside this stood the high priest robed in green; the rest, with the exception of one man in a striped garment, were dressed in white.[2] The high priest recited in a chant the appro-

[1] Petermann says they stood in two rows, and the high priest stood at the head of one of the rows.

[2] No importance is to be attached to the dress. When Dean Stanley saw the ceremony most of the worshippers wore their ordinary dress. Only about fifteen of the elder men, amongst whom was Amram, the high priest, were clothed in long white robes. Dr. McEwan mentions that the high priest was clothed in a grey white satin robe with a white hood of soft texture over his head.

priate prayers and passages from the Torah, while the rest followed him from books. Sometimes they stood, sometimes knelt, and at the occurrence of certain words—I think the sacred names—they drew their hands over their faces and stroked their beards. The sight was very impressive,—this semicircle of stately, white-robed men chanting in Hebrew the tale of the deliverance from Egypt. Occasionally the high priest turned his back upon his fellow worshippers. Generally he was looking towards them, turning his face from one end of the semicircle to the other. One could not help noticing how different in appearance the Samaritans are from the Jews. The Jews are as a rule undersized, and many have mean features; these were all above the average height, several much so, and all had noble faces. I observed that the two worshippers at the horn of the crescent at which I was standing were not joining in the chanting of the prayers. One was a young man, the other a mere lad. I was told that they were the sons of the late second high priest who had died about two months before, and their feelings were too much for them. This one touch of feeling, common to all humanity, bridged the gulf between them, with their ancient service, and us, spectators from the modern world of the West. I cannot tell whether it is part of their regular service or not, but at one point, when the Moslems were specially troublesome, the high priest turned round towards them and began to recite in Arabic a prayer for long life and prosperity to the Sultan, to which the Moslems responded with vehement amens.

As this chanting was to last some time the deacon who had accompanied us and acted as our guide suggested that we should now draw off and take our supper. It was necessary that we should put a considerable distance between us and the camp lest some fragment of our leavened bread should render their camp unclean. We squatted down on the rising ground we had crossed in coming up, and from it we had a complete view of the camp, the chanting group of Samaritans, and that smaller number attending the fires; we also had in full view the Moslems as they surged hither and thither. Thus sure that nothing of importance could occur without our knowledge, we ate our hard-boiled eggs and sardines with an even mind. While going to the place where we had agreed to take our supper we saw, in passing, a small group of lambs huddled together. These, as we learned afterwards, were the Passover lambs.

When we had finished our supper, we returned to the Samaritans. Almost immediately on our arrival they moved in a body to a spot near the smoking pit and the fire with the cauldrons. The lambs, seven in number, were brought forward, and were laid hold of each by two men. I would note here points of difference. Petermann says one man held each lamb between his feet; further, he says the lambs were *five* in number. Dean Stanley and Mills speak of *six* lambs. Dr. McEwan and myself saw *seven*. It may be the Samaritan population has increased, and so more lambs are needed. The whole company formed a small circle, with the

lambs towards the inside. The high priest began again his recitative, joined by numbers of those standing in the circle. At last, when the sun was setting, and the high priest came to recite the words :—"And the whole assembly of the congregation of the children of Israel shall kill it in the evening," at once all the lambs were thrown on their sides by the young men who were holding them ; then a man in a striped robe passed rapidly from lamb to lamb, cutting the throat of each with two deft strokes. In less than a minute, with scarcely a struggle, all the lambs lay dead.[1] Then the men came forward to kiss the hand of the high priest ; the older men he kissed on the cheek.

At this point the pressure of the Moslem crowd became excessive, and their excitement rose. It needed all the exertions of the Turkish police to keep them from bursting through the ring of celebrants and, by touching the lambs, desecrating the sacrifice. The Samaritans, probably moved by this risk of desecration, seemed to resent our curiosity in a way that was in marked contrast to their ordinary courtesy. One of them said to Miss Vartan, who was forced by the press quite close upon him :—"You Christians believe that your Messiah has fulfilled all that this means ; why do you press so curiously to see what we do ?"

About this time there was a cry from the tents, and one or two men left the circle and went to the camp. As the great mass of the Moslems followed, I began to be afraid that something serious had occurred. We were informed it was a woman who was supposed to be dying, and the cry was for someone to remove her to the tent outside, lest the camp should be defiled by the presence of a dead body. I learned that it was Moslems who carried her thither. I may remark that when any Samaritan dies, the friends leave the body, and the funeral rites are all performed by Moslems. After this the Moslems who had left did not return ; the lambs were killed, and that was the only important matter in their eyes.

[1] Dr. McEwan says : "One of the turbaned men ran to the top of a neighbouring knoll, from which the Mediterranean could be seen, and watched the setting sun. . . . . Then suddenly the man on the knoll raised his arm, and in a moment seven knives flashed in the air," &c. I saw nothing of this. The fact that it was the Greater Bairam might cause some changes in procedure. Dr. McEwan also mentions a youth with a white turban running with a bowl of the blood and a bunch of hyssop to the tents, and striking the blood in the doors of the tents. Not only was this not done when we saw the celebration, but Petermann says he asked the high priest why they did not do so, and he was answered that this striking with the blood the lintels and doorposts belonged only to the first celebration—an answer which the Jews also would have returned. Petermann, Dean Stanley, and Mills say that the young men dipped their fingers in the blood and put it on the nose, forehead, and ears of boys. This was not done when I was present. I learn, however, through Miss Vartan, from a lady who saw it some years before, that she observed this done to *one* boy. The presence of the Moslems might induce the abandonment of this rite on the occasion when I saw the observance.

Round each of the newly-killed lambs was gathered a group of Samaritans. We now learned the use of the water that had been kept boiling in the *tângeries* or cauldrons. A young man from each of the seven groups kept continually bringing boiling water in little tin vessels and pouring it on the lambs. The others, some on their knees, some bending over, plucked off with their hands the wool from the skin till it was left bare as the palm of the hand, and white as parchment. The work was done with deft skilfulness, but also with every appearance of haste. It was a strange spectacle, these men, the last remnants of a disappearing nation and a vanishing creed, busy upon the due fulfilment of rites instituted more than thirty centuries ago. Behind them was the Western sky, golden with the rapidly disappearing light of the setting sun. Meantime, with the deepening darkness, was flushing ever more prominently on the faces of the celebrants the lurid light from the fire beneath the cauldrons.

I had at an earlier period observed lying on the ground long poles pointed at the end, some 7 or 8 feet in length, each having a thin crossbar near one end. After the wool was stripped from the lambs the poles were brought and a lamb was affixed by its hind legs to each. The feet were quickly removed, the right foreleg and shoulder cut off for the high priest. The lambs were then rapidly disembowelled, the liver was taken out separately and, as a final act, was stuck into the cavity of the body of the lamb. While this went on the high priest maintained his droning chant. As each group finished they twisted the lamb in some way round this pole or spit (Mills speaks of the pole being thrust through the lamb,[1] this might be omitted on account of the presence of the Moslem mob). After this the lambs were laid one upon another in a small heap on a hurdle.

I heard a voice behind, and turning I saw the man who had slain the lambs standing by the hole out of which we had seen the smoke issuing so copiously before sunset. The fire had now gone down, but from the red embers there rose a glow that lighted up the man's face and figure. The lambs were now brought forward on the hurdle, and the priest continued his recitative beside the heap of carcases. At a pause the man at the hole shouted *wahed* ("one"), and in answer a pole with a lamb on it was brought and by the man thrust pointed end downwards into the glowing embers. The top of the post came, I observed, to within 3 or 4 inches of the top. The man then shouted *t'nain* ("two"), and another lamb was brought and thrust by him into the pit. This went on until the whole seven were placed in the hole; they seemed pretty well to fill it. I did not observe the wood of the spit or pole, but the Jews declare that pomegranate is the only suitable wood (*Pesachim*, 74A). The lambs were not allowed to rest on the side of the pit lest they should be in the slightest degree broiled—a similar caution is to be read in *Pesachim*. The lambs having been duly stuck in, the hurdle was brought and put on the mouth of the pit. On this was placed first grass or herbage of some

[1] This, according to the Talmudic tract, *Pesachim*, 74A, was the way it was done among the Jews.

sort, then over this mud. The men round about knelt down and patted the mud close. Wherever a puff of smoke appeared, there a handful was put till not a sign of smoke or steam remained to show what was beneath.

It was now about nine o'clock, but with the bright light of the Syrian moon it was anything but dark. There was still the ruddy glow of the fire—yet kept up—on which the cauldrons had been boiled. Meantime some men spread on the ground, near the short pillar where the chanting had been, what seemed a huge sail. After this a portion of the men, under the guidance of the second high priest, recommenced the chanting. We learned that the lambs would be left three hours or so in the pit, so it was suggested that we might now pay a visit to the high priest in his tent.

His tent did not differ in any obvious way from the tents of the other Samaritans. Within it was neat and apparently clean and comfortable, not unlike Cook's tents. The furniture consisted of two couches or *dewans*, two or three stools, and several fine carpets. Behind the tent pole the high priest sat on a thick carpet supported by cushions. He was a tall, fine-looking man, between 30 and 40, with high, narrow forehead, and long, glossy, black beard. Our whole party were easily accommodated with seats. Of course there were the usual evidences of Eastern ceremonious hospitality—cigarettes, sweetmeats, and black coffee. As I did not wish to trust my limited Arabic, I got the deacon to act as my interpreter while I entered into conversation with the high priest.

As an act of special courtesy the high priest brought out the famous manuscript alleged, as we have said above, to be written by the great-grandson of Aaron. I had seen it some 14 months before in the semi-darkness of the Samaritan Synagogue; now, by the bright light of the lamp, I was much better able to examine it. The material is parchment, and looks very old, but, not being a connoisseur in parchment, that afforded no guide to me. The characters were pretty much faded. They were of the ordinary Samaritan, so far as I could see in my brief look at it. If, when the manuscript was written, these characters were in use, it would be difficult to date it later than the end of the second century of our era. It is a transition form between the angular character we find on the Moabite stone and in the inscription in Sinjirli and the square character of our ordinary Hebrew manuscripts. This square character begins to appear in Egypt, if I mistake not, as early as 100 B.C., although on the other hand the angular character appears in the Palmyrene inscriptions as late as the middle or end of the third century. I am not aware that the angular was ever used for writing. The Kefr Bir'im inscription, dated 300 A.D., is certainly in square character, and the Samaritan is an earlier stage of development. The MS. is in a wonderful case of embossed silver, which a correspondent of the Palestine Exploration *Quarterly* decides to be 300 years old. I was unable to decipher anything but individual letters in the old manuscript. They offered for sale copies of the Torah in the Samaritan character, but the price asked was too much for my limited purse. I could easily read these

copies, as the letters were distinct and the ink black. It was with a mild aspect of wonder that the high priest heard me read a verse or two.

I thought the most profitable way to occupy the time was to ask questions of the high priest. I asked after the fate of the Samaritan community that was still surviving in Gaza when Sylvestre de Sacy corresponded with the Samaritans of Nâblus. I should say that at the mention of this *savant* the high priest and the two young men who were with him looked specially interested. I was informed that the community in Gaza had ceased to exist there some 60 years ago. The existence of the communities of Samaritans in Cæsarea and Ashkelon, mentioned by Benjamin of Tudela, he was unaware of. Now, at all events, these 160 Samaritans resident in Nâblus are all that remain of the Samaritan race and creed.

I asked about the Alexandrian community of Samaritans, to the existence of which Josephus refers. He had never heard of it. This led me to ask if they had any traditions of the Samaritan Greek version which Josephus alleges the Samaritans made as an offset to the Septuagint. He knew nothing of this rivalry, but said that when Ptolemy sent to Palestine for 70 translators, they in Jerusalem sent 65 and they in Samaria sent five. When they arrived in Egypt they were placed each in a cell by himself. After they had completed their work of translating the Torah, it was found in regard to the five Samaritans, that while they differed in words, the sense they expressed was the same. He did not say what had been the result in regard to the 65 Jewish translators. He added the astounding information that they had still the five versions made by their representatives. I told him that he could almost get any price he chose to ask for any one of these. He said that Petermann and Merx had seen them and made copies of portions of them. I tried to let him know that if what he said had been true, within a fortnight after either of these learned men had reached Germany every scholar in Europe and America would have been aware of their discovery. I might have added that within six months it would afford occasion for questions in examination papers. He would not be moved. When I told Mr. Falscheer of this the following morning, he promised to gather all the Samaritans together on my return to Nâblus, which I then hoped to do in six months, and we could examine all their manuscripts and see if there were any Greek ones among them. Circumstances prevented me fulfilling my intention, so those alleged Greek versions remain undeciphered.

Just when we had reached this point in our conversation the second high priest entered and informed the high priest that the time was come when the Passover should be eaten. It was not anything like three hours since the lambs had been put in the oven, but all Easterns have vague ideas as to the passage of time. I presume the time would really be gauged by the repetition of certain prayers. We rose and went out, followed by the two high priests. We ranged ourselves a little way from the pit which had served as an oven, yet near enough to see

everything in the clear moonlight. At once, on the arrival of the high priests, the Samaritans fell on the little mound that marked the mouth of the pit, and in a short time had scraped away the earth till the steam began to rise here and there in faint curls of vapour through the grass on the top of the hurdle. When, however, the hurdle itself was raised quite a cloud of steam rose from the pit. Seven new baskets were then brought forward, resembling in shape and material those in which carpenters carry their tools. Then, one by one, the lambs on their spits were brought out. In the moonlight they looked too small and black to be lambs. After being lifted out they were detached from their poles or spits and put into the baskets. An untoward accident happened in regard to one of the last lambs brought up—it fell back into the pit. After some competition as to who should have the honour, a man descended into the glowing pit and brought up a portion of the lamb, and then, after a few minutes' rest and breathing, went down again for the rest. One could see by his exhaustion what a hazardous operation it was. The great heat, the deadly fumes, made it necessary that the descent and ascent should occupy but a few seconds. Some 20 years ago, when Dr. Vartan saw the Samaritan Passover, the same thing occurred.

When all the baskets were filled, they were carried to the huge sheet of which I spoke, and were placed at different points on it. Then with loins girt and staves in their hands, the Samaritans began to eat the Passover, some standing, some sitting on their heels, and some in an intermediate posture. They had unleavened bread and bitter herbs, which they ate with the lambs, but I did not notice when these adjuncts were brought. I observed some women and little children—girls, I think, not more than half a dozen in all—come and sit down on a small bank made up of stones and earth that seemed to form the boundary of the sacred area where the sheet was spread. To them some of the lamb was taken. To the rest of the women and children in the tents the fragments were conveyed in the baskets after the men had eaten. While they were eating they seemed to me to be repeating something, but this did not prevent them talking with outsiders. The Doctor of the Municipality, a Syrian Christian, shouted to them that they would make themselves ill by gorging so. They answered with a laugh, but went on busily eating. When one considers their number, they could not gorge much if every one of the 160 should get a little of the seven lambs. They handed us part of their Passover bread and of their bitter herbs. Their unleavened bread is not like that used by the Jews in this country, which is really biscuit. It is more like what is used by the Galilean Jews, only thinner ; it seemed to me as thin as parchment. The bitter herbs appeared to me to be like our bog myrtle, but I was told it was hyssop. I put what I received in my pocket with a view to examining it in the morning ; when the morning came I found only some broken fragments of leaves—utterly unrecognisable.

I went to ask for the woman who had been carried away to the outside tent to die ; she was still living. Some of her friends, seeing

that she was not to die immediately, brought her a piece of the liver of the Passover lamb. They have strange stories of the curative effect of partaking of the Passover. Sometimes a man or woman, apparently not likely to live a day, has been taken up to the sacred mountain and has partaken of the sacred feast, and thereafter revived so as to be able to descend the hill again, and live at all events a few weeks longer. The fact that they always have this additional tent proves they do not put much trust in these legends. As for the woman, though she had a good deal of fever and was delirious, she became a little better, and had not died by the time we left Nâblus.

When we returned to the worshippers, we found them collecting everything that had been left of the lambs ; the smallest particle of hair or piece of skin was all carefully picked up, and, along with the portion consecrated to the high priest, burnt in the fire on which we had seen the cauldrons boiling before sunset.

Before going down hill we paid another visit to the high priest, and renewed our conversation. I asked about his ideas of the Messiah ; I found these were very vague. The Samaritans expect someone to come, but what he is to be, or what he will do, they are not sure. Mr. Falscheer afterwards told me that he found that they invented theories of their Messiah for his benefit and that of other questioners. I inquired of the high priest what was his interpretation of Gen. xlix, 10, כִּי־יָבֹא שִׁילֹה. He said it should be, "till Thou come to Shiloh," כִּי־תָבֹא, a reading that certainly is not in my copy of the Samaritan Pentateuch. The idea seemed to be when Judah came with Rehoboam to Shiloh then the sceptre departed. The father and predecessors of the present high priest interpreted this passage to Mr. Mills in a different way. Shiloh, he said, meant Solomon, whose innovations caused the sceptre over Israel to depart from Judah. The end of the verse he applied to Solomon's foreign alliances. In connection with this I would refer to Merx's discovery of a Samaritan poem on the תָּהֵב, as the Messiah is called. The name is supposed to mean "the returner." He is to restore the temple on Mount Gerizim, discover the holy vessels, bring back the Jews to the true faith, conquer seven nations, and after having lived 110 years to die full of honour. Many of the phrases suggest our Lord's conversation with the woman of Sychar. Robinson ("Researches," vol. ii, p. 278) says that the Samaritan youth who showed him about the holy places called the Messiah *Mahdi*.

As it was now considerably past midnight we had to think of returning to Nâblus. In gratitude for his kindness we each contributed a medjeedie to the high priest, and with many salaams took our departure. The moonlight, as always in Syria when it is near full moon, was piercingly clear, so we had small difficulty in riding down the rocky pathway to Nâblus.

THE SITE OF GOLGOTHA AND THE HOLY SEPULCHRE.

By Gray Hill, Esq.

I am not competent to discuss this question on historical grounds. But I may say that looking down upon Jerusalem from my house on Mount Scopus, as I have done daily for about two months in every year for many years past, I find it quite incredible that the Church of the Sepulchre, which is reputed to contain the true tomb and also Calvary, can have been outside the second wall at the period of the Crucifixion. Where could the population which the city must then have held, even at ordinary seasons of the year, have lived, and how is it possible that the vast numbers resorting to it at the time of the great feasts could have been accommodated if this was the case? There are probably about 70,000 people living within and without the walls to-day, but I should think not more than half of this number are now dwelling within; and yet there is but little vacant land within not included in the area of the Haram, which must at that time have been, as it is now, clear of dwelling places.

I may mention that Canon MacColl is entirely mistaken in saying that the plot of ground containing "Gordon's Tomb" is not intrinsically worth £20.[1] The piece of land adjoining it to the south, and lying between it and the main road running past the Damascus Gate, which comprises twice the area of the place in question, has lately been sold for a large sum. I am told, in answer to inquiries, that no less than 2,500 napoleons (£2,000) was paid for it.

The value of the land in and close to Jerusalem has risen very greatly within the last few years, and extraordinarily high prices have been paid for portions of the strip lying between the north wall and the road above mentioned, and extending from the New to the Damascus Gate. The chief part of that strip is now enclosed and planted or built on, and I am informed that the lowest portion—that hitherto occupied by a small gipsy encampment—has just been bought for a large sum.

I think that when the purchase of "Gordon's Tomb" was first proposed Canon MacColl wrote to the "Times" urging that a title could not be obtained which would be safe from the interference of the Turkish Government. This also is quite erroneous. Much of the land in and about Jerusalem belongs to Christians without any such interference. I myself have held land on Scopus for the last 12 years, and have from time to time purchased more, without any difficulty of the kind.

The question of the site of the sepulchre is full of interest, and is worthy of fair and temperate argument upon both sides. There is surely

[1] Canon MacColl probably referred to the date of purchase when land was much less valuable than it is now.—Ed.

no reason for heat in the discussion. And whether "Gordon's Tomb" be the true sepulchre or not, the fact that it is a rock-cut tomb in a garden close to an ancient place of execution a little outside the present walls of Jerusalem, which has remained undisturbed for many centuries makes it worthy of acquisition and maintenance.

Mere Hall, Birkenhead,
November 18*th*, 1901.

NOTES ON "DU BIMETALLISME CHEZ LES HÉBREUX.

By Lieut.-General Sir Charles Warren, K.C.B., F.R.S.

Vicomte François de Salignac Fénelon has published a corrected edition of his pamphlet "Du Bimetallisme chez les Hébreux," in which he gives the values of the Hebrew and Roman weights and measures of capacity, and the weights of the gold and silver minæ, and of the shekel and daric. His estimates are founded on the supposition that the Maccabean shekel weighed exactly 14 grammes, and was the 3,000th part of a talent of 42,000 grammes.

In his results his measures throughout differ about 1 per cent. from the measures I have given in Tables V, VIII, and X, "The Ancient Standards of Measure in the East," *Quarterly Statement*, July and October, 1899.

Fourteen grammes are equal to about 216·048 Imperial grains; but the Maccabean shekels weigh about 218 Imperial grains. Had M. Fénelon taken the full weight of the shekel in grammes and parts of grammes instead of the round number, 14 grammes, his results would have accorded exactly with those I have given in Tables V, VIII, and X above alluded to, and his gold and silver minæ would also have been the same. The only discrepancy is in regard to the golden daric; he arrives at a golden daric of 121·2 Imperial grains, while I have arrived at one of 131 Imperial grains.

We have started from two opposite extremes, and have arrived (except in the case mentioned) at exactly the same conclusions. He has started from the Maccabean shekel and a stone talent found at Jerusalem weighing about 42,000 grammes, while I have started from the ancient cubit of 20·6109 inches, and derive everything from it without reference to existing weights.

TRANSLATION OF AN ASSYRIAN PARABLE.

By Colonel C. R. Conder, LL.D., R.E.

A tablet, described by George Smith as a fable of the Horse and Ox, and translated by M. Alfred Boissier ("Proceedings Biblical Archæological Society," January, 1899), is of interest as showing the same appreciation of the war horse in Assyria that we find in the Book of Job. It is written in rude Sapphics, unrhymed, and is unfortunately much damaged. It appears to have begun with the prayer of some king for rain, and gives a poetical description of the Spring time following. The ox and the horse then compare their lives, each in favour of his own. The whole of the legible part may (with a few restorations) be thus rendered, in something like the metre of the original :—

His fields are flourishing, his [land] rejoices.
Swamps and moist places [blossom] around.
Highlands [are streaming], flooding the country.
Depths being poured forth, overflow the shore lands.
Covering the country, they dig and they till it.
And where men till not, flocks are returning.
In all the pastures, herbs now are sprouting.
In Earth's waste places, bursting from below.
Food of flocks increases, and fields are flourishing.
The Ox and the Stallion, there are companions.
Fat are their bellies, on account of pasture.
Gladly their hearts rejoice, for there is plenty.

The Ox.—Spake the Ox talking, saying to the Stallion
Famous in battle—
" I perceive I am, happy in fortune.
" From the year's end to end, I can look for pasture,
" Floods being dried for me, deep pools are welling.
" Swamps and moist places, are becoming gardens.
" Depths being poured forth, overflow the shorelands.
" Highlands are streaming, flooding the country.
" Covering the country, they dig and they till it.
" Places they till not, plenteous showers water.
" Prudently the peasant, turns . . . . . .
" Crying ' they grow for me, ...
" But the horse masterless, roams as a wanderer.
" Never stays in fields none waters . . . . . .
" Therefore for lack of . . . . . .

THE HORSE.— . . . . . .
" Fate is appointed . . . . . .
" Copper well proven . . . . . .
" For my clothing clothes me, ...
" Me no master mounted, ...
" For no King or Chieftain, no prince or great one,
" Came to the plain."

THE OX.—Spake the Ox talking, saying to the Stallion
Famous in battle—
" Canst thou without calling, ...
" Whom in thy battles, ...
" Strongly the chariot, I complete with harness.
" From my skin a toughness, [fit for the harness].
" From my tendons toughness, [fit for the bowstring].
" Comes for the warrior, who the quiver [carries].
" Terrible and shining, he draws forth [the arrows].
" Spurs of thy masters, ...
" Seest thou not the journey, is difficult [and weary].
" Blinded are thine eyes . . . . . .
" Not the way thou goest, [leading to] pastures.'

THE HORSE.—Spake the Horse talking, to [the Ox] saying—
" In my worth delighting, ...
" Spur . . . . . .
" Weapons . . . . . .
" . . . . . .
" Heart of a lion, ...
" Crossing the river, ...
" On mountain pathway, ...
" Thou, O bull, must struggle, [tugging] the water wheel,
" In all thy labour, unconsidered [ever].
" Fed on dusty herbage, ...
" While the horse is striving . . . . .

THE OX.—Spake the Ox talking, saying to the Stallion—
" As regarding water wheels, what you say is . . . .

This is described as the first chapter of a poem on Istar, belonging to the palace of Assurbanipal (7th century, B.C.). The fable evidently contrasts the duties of the soldier and the peasant, and the comparative glory and utility of their lives. It is a pity that the last words of the Ox are lost. Possibly he is supposed to have concluded, " What you say about water wheels is true enough." I have ventured to make some minor alterations in the translation, on the authority of the meanings given by Dr. Schrader for certain Assyrian words, and for other reasons.

ZUALLARDO'S TRAVELS.

By Colonel C. R. Conder, LL.D., R.E.

Captain Oliver, R.N., having kindly lent me a copy of this work, which was published in 1587 in Rome and is somewhat scarce, I find that it has particular value on account of the engravings of places in Palestine, from sketches made by the author, who claims to have been the first traveller to attempt such drawings. They are evidently genuine, though often very imperfect, and define some of the doubtful minor sites in a satisfactory manner.

Signor John Zuallardo was born in Belgium, but writes in Old Italian. He left Venice on June 29th, 1586, and, in consequence of delays, only reached Jaffa on August 25th. Landing next day, the party visited Jerusalem, Bethlehem, and 'Ain Karim, and returned to Jaffa, leaving on September 11th, and reaching Tripoli on the 16th. Here they waited till October 13th, and arrived again in Venice on the 23rd, after a rapid but stormy passage. The party consisted of nine laymen and 11 clerical members. Three laymen were made Knights of the Papal Order of the Holy Sepulchre, including the author. The chief personage was Philip de Merodé, Baron of Frenz, from the Low Countries. Among the clerics was an Irishman named William Healy. They suffered much from Turkish and Arab exactions, and the book represents the state of Palestine 68 years after the Turkish conquest by Selim I, a time when Christian influence was at the lowest ebb in the country, and the Latins only represented by the Franciscan monks at Jerusalem, Bethlehem, and Nazareth, whose presence was allowed by Saladin's treaty of 1192 A.D., as renewed by later Moslem rulers.

Wherever Zuallardo speaks of personal knowledge his work is of interest. The additions taken from such writers as Eugesippus, Brocardus, Adricomius, &c., whom he quotes as authorities, have, however, no value, representing the false geography of the twelfth and thirteenth centuries, and the false sites originated by the Crusaders, or added by the Latin clergy and the Franciscans from the thirteenth century downwards.

The volume is called "Il Devotissimo Viaggio di Gerusalemme," and is divided into five books, of which the third is the most valuable.

Book I.

This is concerned with advice to intending pilgrims, and general information. They are counselled to select a large Venetian ship, and to tranship at Tripoli rather than at Cyprus. The horrors of the sea passage are minutely explained. The best passages, as a rule, occupied (as in the twelfth century) some 15 or 20 days from Venice to Jaffa, but they might last two months or more. The pilgrims on landing were to dress like Greek or Syrian Christians, but advised not to travel with them, and to beware of Jews as Turkish spies; or they might assume the

rough robe and cape of a palmer's dress. The whole country, except near Jerusalem, seems to have been in a state of anarchy, and unsafe for travellers. They were liable to have money and ornaments snatched from them, with the words "by your leave." The fondness of the natives for red silk (still the peasant bridal dress) is noted, and the wearing of green is to be avoided, as the Moslems reserved this colour for descendants of the Prophet. No arms were worn by pilgrims. The permission of the Papal Legate at Venice must be shown to the Latin Guardian at Jerusalem, and letters of recommendation to consuls, vice-consuls, merchants, and bankers are advised. The travellers were not allowed to inspect fortifications, and were objects of suspicion to the Turks especially, unless they came from Venice, France, and the north, as they might be spies from Christian lands at war with Turkey. They took assumed names, and were afraid to show themselves to be rich. They journeyed in constant danger of being either killed, imprisoned, or made slaves. The natives were armed with bows and arrows, and the horsemen with swords and spears. The drunkenness and brutality of the Turks is described, and the execution—four years previously—of a Spanish woman, Donna Maria, who had openly attempted to convert Moslem women to Christianity, and was burnt head downwards in the square before the south door of the Holy Sepulchre Church. The Franciscans on Zion were in danger of false accusation by their enemies. The journey was rendered expensive, not only by legitimate charges, but by presents to pashas, to Arab chiefs, to villagers demanding toll, and to the boatmen and donkey drivers, who might sell pilgrims as slaves in the ports, or denounce them to the ruling class. But after two unsuccessful attempts in native boats, from Cyprus and Tripoli, the party landed safely at Jaffa in the autumn.

Book II.

This describes the voyage from Venice to Jaffa, and is of no importance to our subject. At Zante, in the Ionian Islands, four English sailors were found in danger of death, having cut to pieces a picture of the Madonna. It may be noted that Queen Elizabeth had founded the Levant Company three years before, and these were probably some of her Protestant "sea dogs." Cyprus was already held by the Turks, and Tripoli appears to have been the chief trading port of Syria, with communication through Aleppo into Central Asia. Reaching Jaffa, the pilgrims sent to Ramleh to announce their arrival, and slept among the ruins of the town, till shown some vaults used as magazines, where they were guarded, and the peasantry sold them eggs, fowls, and bread.

Book III.

A picture shows Jaffa in ruins, with vaults near the landing place, and two towers on the hill, in one of which were certain mangonels for defence. The Guardian no longer came down to the coast to meet pilgrims, who now only came a few at a time. Formerly, there had

been large parties, and a regular Venetian fleet to bring them in spring. The change seems to have been due in part to the "spread of heresy," as Zuallardo terms the Reformation, and to the decay of Latin Christianity.

Mounted on donkeys the party set off for Ramleh on August 29th, and thence reached Jerusalem next day. Iasor (*Yazûr*) is described as a fine village with olives and other trees, and near it, a little to the east, was a mosque with nine small domes, and a waterwheel and well. Another village (*Surafend*) had only a few sycamore figs by it. Ramma (*Ramleh*) had a hospice partly ruined, which had been built by Philip the Good of Burgundy, on the supposed site of the House of Nicodemus. The picture shows the dome of the Church of St. Mary (already made a mosque), and the tower of the "Forty Martyrs," as it was called by Christians (forty martyrs of Cappadocia, fourth century A.D.), which, however, is an Arab building belonging to the mosque of the "Forty Champions" (*Arb'aîn Meghâzi*). The author knew that Rammola or *Ramleh* means "sandy," but doubts if the site be Arimathea or Ramathaim Zophim. In reality Ramleh appears to have been a purely Arab town, built in the time of the first Khalifs of Damascus, and not to be identified with any ancient site at all. Here the pilgrims met a young Arab chief who took toll, but did not accompany them, only sending his sword with them as a token.

Latrôn is, of course, described as the castle of the "Good Thief" (Boni Latronis) Dismas. It was really a castle existing before 1160 A.D., and rebuilt before 1292 A.D., then belonging to the Teutonic Knights, its name, Toron, signifying a "hill" in old French. The picture shows this castle in ruins, but much more complete than it now is. Not far off to the north was a mosque called the "Tomb of the Seven Maccabees," martyred with their mother by Antiochus in Antioch. This is mentioned by earlier writers, and is shown on Marino Sanuto's map (1321 A.D.). It is described as a bow-shot to the left of the road, and drawn as an arcaded building with a small dome. After passing Latrôn the party reached the well of Job (*Deir Eyûb*). Pictures are also given of Serith (*Sarîs*) with its tower, and of the Church of St. Jeremiah (at *Abu Ghosh*), the latter being a good representation. This some regarded (quite wrongly) as the site of Anathoth. The Franciscans had here been murdered, and the place was abandoned by the order. A little further on the supposed site of Modin was seen among the mountains, with ruins of a church. The site intended is possibly *Soba*, the mediæval castle of Belmont, which was not the ancient Modin (*el Medyeh*).

The Valley of the Terebinth was crossed at *Kolônieh*, and the picture gives the name Calonia, and the legend "Here Golias was killed." This was the false site of the Valley of Elah (*Wâdy es Sunt*) in the twelfth century, surviving among the more ignorant till to-day.

The next picture, of the approach to Jerusalem from the west, shows the minaret over the Jaffa Gate, and the little mediæval building close to *Birket Mamilla*, with other Moslem tombs. On the left was seen Ramathaim Zophim or St. Samuel (*Neby Samwîl*), and the flat ground by Mamilla is called "The Fuller's Field." There were a few vines and

olives in this part. The pilgrims were not allowed to enter the city, but conducted south to the Franciscan Monastery of St. Saviour on Sion.

A bird's-eye view of Jerusalem is then given, and the names of 36 places in the city are marked. The author, as usual in the Middle Ages, considers that the Church of the Holy Sepulchre was outside ancient Jerusalem, and included by Hadrian. He draws his theoretic line of ancient wall from the Jaffa Gate to the Damascus Gate, passing east of the cathedral, where he shows the Gate of Judgment, at the ruined archway still standing east of the church. This, however, is a Byzantine reconstruction, once belonging to the enclosure of the church itself. He shows also an Iron Gate, apparently in the lane leading from David Street, south and west, to St. Mark's and St. Thomas's Chapels, which are marked in relative position on Zion (*see* P.E.F. *Quarterly Statement*, October, 1895, pp. 320, 322). The House of Annas, the high priest, is shown west (or south-west) of the Church of St. James (the Great), as described by earlier mediæval writers. I am not aware that this site has been described as now existing in Jerusalem. This house is sometimes placed by pilgrim writers in quite another position, near the north side of the Temple. A line, as if of a wall, is shown on Sion, including *Neby Dâûd*, but from a picture given later it is doubtful whether this represents more than a dry-stone enclosure. It is, however, interesting as perhaps showing that the ruins of the wall here built about 1243 A.D. were still visible above ground.

The first day's excursion (August 31st) begins at the "House of Zebedee," a church converted into a mosque, at the north-west corner of the *Muristân*, and thence continues to the Iron Gate, to St. Mark (an old church), and St. Thomas (in ruins). St. James the Great is said to have been built by Spaniards—probably in error, Iberians being really Georgians, not Spaniards—but held by Armenians. A picture of the House of Annas is given, representing a church with a clerestory and aisles, in an enclosure. St. Saviour's (which was the supposed House of Caiaphas), between *Neby Dâûd* and the Sion Gate (and of which only a fragment of wall now remains) is shown with a pointed roof, surrounded by a courtyard with buildings. The pillar on which the "cock crew" was beside the west entrance, and the Latin graveyard outside to the west. Pope Sixtus IV had translated the sites of the Last Supper and descent of the Holy Ghost from the Cœnaculum (*Neby Dâûd*) to the altars of this church when the older church had been seized by the Moslems; or, perhaps, had rather transferred the indulgences for visiting the old sites to the Franciscan centre at St. Saviour's. Round this centre were shown, as in the thirteenth century, various holy places. The Prison of Christ (*see Quarterly Statement*, October, 1895, p. 324) is mentioned as just to the right of the altar. Among the others, the place of the Virgin's death has become well known, since 1898, as the *Dormition* acquired by the Emperor of Germany for German Roman Catholics. It is connected with the Apocryphal account of the Virgin's death, which was famous in the Middle Ages. The remains of the stone

from the Holy Sepulchre were still shown in St. Saviour's. The other sites are those noticed by pilgrims of the thirteenth and fourteenth centuries, which did not exist before the Latins took Jerusalem in the twelfth century.

Two pictures of Sion are given as viewed from the east. *Neby Dâûd* already possessed its minaret. The Aceldama building is described as partly rock-cut, and shown as surmounted by several small domes. The bodies of persons there buried were visible in the vault.

In speaking of Siloam the existence of some remains of the church over the pool is noticed, which is not usual in other accounts of the Middle Ages. The view given of Sion from the west is also remarkable, as showing the scarp at the Protestant cemetery (the ancient south-west corner of Jerusalem). This is described as the remains of "David's Tower" (which is thus not placed at the Castle of the Pisans or present *Kal'ah*), and the *Birket es-Sultân* below is called the "Fountain of Bersabea" (*i.e.*, Bathsheba), where she washed, being visible from the tower on the hill above. This, of course, is apocryphal, since the pool in question was made late in the twelfth century A.D. The scarp in question does not appear to be described by other writers.

The second excursion (1st September) was to Olivet and the Via Dolorosa. Some of the minor sites are shown on the picture of Olivet, in a manner which defines them better than the older descriptions. Thus the place where St. Thomas is said to have received the Virgin's girdle is placed at the junction of the two roads up Olivet, near the Virgin's tomb. The Latin site of Gethsemane is described. A picture of Absolom's tomb, and the bridge by it over the Kidron, shows certain hand and foot prints of Christ on the south side of the bridge, east of the stream. These are not described by earlier writers. The rock tomb adjoining Absolom's monument is said to be that of either Jehoshaphat or Manasseh. The Beni Hezir tomb is called the hiding place of St. James the Less, and the pyramidal tomb to the south that of Zechariah. The traditional names of these monuments (of which sketches are given) differ in accounts of various ages, and have no value, as the tombs belong to about the first or second century B.C. at earliest. It is remarkable that a heap of stones is shown by Absolom's monument, witnessing that the practice of throwing stones at it—among Jews and others—already existed. The carved lions at the present St. Stephen's gate are described as being contrary to Turkish (religious) law. They were probably erected in 1542 A.D., when the wall was rebuilt by the Turks. The "Stoning of Stephen" is placed outside this gate. In the twelfth century it was still shown—as in the fifth—outside the Damascus Gate. The tomb (properly speaking, the second tomb) of Stephen was shown on Sion. His remains were believed to be recovered in the fifth century at Caphar Gamala (near the present *Tell Zakarîya*, recently excavated by Dr. Bliss) and then taken to Mount Sion.

Pictures of the Via Dolorosa define the stations very clearly. Pilate's house (including the Chapel of the Mocking) was the modern barrack, in

which the said chapel (the older St. Sophia of Justinian's time) still exists. It was believed that the groans of Jews awaiting the Day of Judgment could be heard here. This, in another form, is a very old superstition, since the Bordeaux pilgrim here speaks of the "place where Solomon tormented the demons." Herod's House seems to occupy the site of the present Chapel of Flagellation (north of the Via Dolorosa), to which the site in the barrack has been transferred, and which was in the twelfth century called *Le Repos*. The Scala Santa (transferred to Rome, and much increased in dimensions it may be mentioned) is said to have stood somewhere near the north-west corner of the *Serai*. The Ecce Homo Arch is shown broken down on the north side, and with two arched windows above the arch. The site of the Spasma Virginis is described as a ruined chapel, south of the Via Dolorosa, and 100 paces west of the Ecce Homo Arch. This chapel seems now to have disappeared, and the site is transferred to a niche in the wall near the arch. The remaining stations seem to be described much as at present, namely :—"Simon the Cyrenian," at the corner opposite the Austrian Hospice ; "Daughters of Jerusalem," on the left hand immediately to the south ; "The House of Dives," further south at the next corner ; "The Pharisee's House" (one of the scenes of the unction by the Magdalen), also on the left near the same corner, on the south side of the Via Dolorosa ; "Veronica's House," by the arch as now, and finally the "Gate of Judgment," already noticed. All these stations were established by the Latins in the twelfth or thirteenth century at earliest, and are unnoticed by early pilgrims, excepting the Prætorium and Ecce Homo Arch.

The third excursion (September 2nd) was to the summit of Olivet and to Bethany, with the first of three visits to the Church of the Holy Sepulchre. The usual sites at Bethany and Bethphage, &c., are described, the majority of which are not older than the thirteenth century. A sketch of the small domed Chapel of the Ascension is given, and the picture of Olivet is repeated from the former p. 152 on p. 171. A careful plan of the Holy Sepulchre Cathedral and a full account of its details follow. Some of these are of historical interest, and the pictures are valuable. The sites shown were the same as in our own time, and in the twelfth century. The most remarkable difference was in the existence of the tombs of the Latin kings under Calvary. At this time the steps now leading up on the west to the Calvary Chapels did not exist, the only flight being on the north. The tombs of Godfrey and Baldwin I remained (though desecrated by the Kharezmians in 1243 A.D.) in front of the chapel of Adam, and a view of the two storeys of chapels, and of the two tombs, is given with larger drawings of the latter showing the well-known inscriptions. These have been reproduced by De Vogüé ("Églises de la Terre Sainte"). The tombs of other Latin kings and queens were against the south wall of the choir, close to that of Baldwin, which was north of that of Godfrey. A picture is also given of the south entry to the church, which is fairly correct, though omitting the windows over the gates. There is also a picture of the rotunda, showing the cedar

dome open in the centre which had been restored by the Franciscans in 1550 A.D. The tombs of Godfrey and Baldwin were removed by the Greeks after the great fire of 1808 A.D., and the present dome of the rotunda was built in 1868. The old twelfth century chapel of the Sepulchre is well drawn by our author (and this has also been reproduced by De Vogüé). He states that the flat roof of the same was covered with lead, and that small water channels were provided to carry off the rain—the rotunda being then open above the little belfry-like cupola of the tomb. This older chapel was architecturally much more picturesque than the present heavy building.

The walls of the rotunda, just under the dome, retained the mosaics on gold grounds, which the author ascribes to the Crusaders, and which were erected in the twelfth century; Constantine and Helena (and we may add Heraclius) were represented among the prophets. The position of these pictures is shown in Zuallardo's drawing.

Three of the pilgrims were made knights of the Holy Sepulchre, being "dubbed" with a sword said to be Godfrey's, and wearing gilt spurs also supposed to be his, as they knelt with their heads on the Sepulchre. This sword and the spurs were, perhaps, the same still shown by the Latins as those of Godfrey of Bouillon. An ancient picture of the Resurrection is mentioned as painted above the tomb itself, and is shown in a picture of the interior of the Sepulchre.

The journey to Bethlehem is next described, with a view of the whole route. St. Cyprian's (probably *Deir Abu Tôr*) is not noticed, but a terebinth is shown on the road near it as one where the Virgin used to rest. The "Tower of St. Simeon" was at or near *Kusr esh Sheikh*. Then follows the Well of the Magi (*Bîr Kadismu*), and afterwards *Mâr Elîâs*, with a small, open, domed building to the west called St. Habacuc. Further south, as usual, are noticed "the field of peas" and "Jacob's House," which latter seems now to have disappeared. Rachel's tomb is shown with open arcades on another sketch, and surrounded with an enclosure containing a small *Kubbeh* either side of the main structure. The cenotaph was visible within. The arches have now been built up solid. The Bethlehem sites are the same now shown. Hardly any of these holy places are noticed by pilgrims before the twelfth century. The Frank mountain is called by Zuallardo a Christian fortress of Betrulia (not the Bethulia of Judith, we learn).

The visit to *'Ain Kârim* follows, with pictures of the church of St. John the Baptist and of the House of Elisabeth. The latter was in ruins, with remains of pictures on the walls. Thence the party went to the "Desert of St. John" (*el-Habs*), west of *'Ain Kârim*, and the picture shows this cave with a ruined monastery above. On the way back, near Philip's Fountain (*'Ain Hanniyeh*), were shown the impossible sites of Ziklag and Eshcol, as in the fourteenth century. At the Convent of the Cross are noticed the paintings of saints on the walls, which still remain. This monastery was then held by the Georgians.

After another visit to the Greek Monastery beside the Holy Sepulchre Church, and (on September 8th) to St. Anne, the party finally left for Ramleh on the 9th, having passed 10 days in the hill country. The personal account of Palestine proper thus closes, and only when speaking of Tripoli is Zuallardo again describing what he had seen.

Book IV.

This is a compilation from older accounts, of the topography of Palestine generally, repeating all the errors of Burchard of Mount Sion, and of other mediæval travellers or compilers. Zuallardo often either took careless notes of what the Franciscans may have told him, or misunderstood the older writers. His account is therefore sometimes very confused. Bezet (or Bezek) he places (wrongly as regards both names, which were distinct) somewhere near *Beit Jâla*, like other writers. Adullam he mentions at the traditional site near *Teko'a*. Achille (Hachilah) was placed in the Middle Ages at Masada (*Sebbeh*), which is impossible, and our author does not clearly state where it was. "Sarah's room" (camera) near Hebron is apparently *'Ain Sâra*; at the celebrated "Field of Damascus" close by (where Adam was said to have been made of the red earth, which some pilgrims used to eat) we find notice of a regular trade with Egypt and Abyssinia in this earth, conducted by Turks. It was also taken to Europe for rosaries and crowns (corone). In connection with Solomon's Pools the aqueduct to Jerusalem is mentioned (and is shown in a picture, passing above the *Birket es-Sultân*); it appears to have been then in use, as also in 1192 A.D. (*see* "Life of Saladin," Pilgrims' Text Society's translation, p. 351).

Speaking of the journey to Jericho, our author places Baturim (Bahurim) near the Fountain of the Apostles. He speaks of the "Desert of St. Jerome" as containing a church and monastery ruined by the Saracens, but adorned with pictures, including the figure of St. Jerome. Apparently he refers to the pictures at *Kasr Hajlah* (twelfth or thirteenth century), now destroyed, but among these figures—which had their names above them—I did not find that of Jerome. He distinguishes the Mount of Temptation (*'Esh el-Ghurâb*) from Quarantania (*Koruntul*), and mentions two chapels at the latter site, with pictures such as that of Christ treading on Satan. A picture of St. Michael and the dragon survives in one of these two chapels, which may be what is really intended, as the account was taken second-hand from the Franciscans. The pictures are wrongly attributed to the fourth century, being really of the twelfth century A.D. at earliest. The corpses of hermits, in various attitudes of devotion, are said to have been buried in a cave on this mountain.

Zuallardo, like his predecessors (and even like William of Tyre), confuses Montreal (*Shobek*) and Crac (*Kerak*) with Petra (*Wâdy Mûsa*), and places Emmaus wrongly at Nicopolis (*'Amwâs*), and Kirjath Jearim (*'Erma*) wrongly on the road from Jerusalem to Lydda. Gibeah is also confused with Gibeon (*Jeb'a* and *el Jîb*), and Michmash or Magnas with

Bîreh, as in earlier writers. In Galilee Menla is apparently the same as Burchard's Abel Mehola (*'Ain Mâhil*), north of Nazareth. I find that I have omitted to note the latter in annotating Burchard (p. 39). The other sites in the north are mostly mediæval Latin sites, not those of the Greeks which are sometimes much older and more correct. In Lebanon our author speaks of the Maronite Monastery of Canobin, and of another of St. Antony where mass was said in Chaldee (*i.e.*, Syriac). This book generally is of little value and contains no pictures.

Book V.

This describes the voyage to Tripoli, and gives a valuable account, with a picture, of the latter town, where Zuallardo spent four weeks waiting for a Venetian ship. As regards the disputed site of Nephin, Zuallardo clearly identifies it with Anefe (*Anfeh*), and shows it on his picture as a town by the sea, north of Capo Pozo (*Râs Shakkah*): hence Ritter appears to be incorrect in supposing the latter promontory to be the site of Nephin.

At Tripoli there was little cultivation in the plain between the town and the Marina, excepting the mulberry trees for silkworms; but the lands at the foot of Lebanon were fully utilised for vines, &c. The sand of the dunes at the Marina (*el Mîneh*) were taken to Venice to make glass. The making of such glass had been learnt by the Italians in Syria. The women are described wearing the white *Izâr* and black face veil as at present, with red or yellow Saracen boots. The children carried on their shoulders had bracelets and anklets of silver. Italians, Frenchmen, and Englishmen had *funduks* or inns in the city, and the Jews a large one by the Bazaar. The mosque with tame fish (*el Bedawiyeh*, once a church of St. Antony of Padua) is noticed, and the *jereed* games of the Janissaries. The Turks were richly dressed in cloth of silver and gold, but only formed a small official class. The Moslems wore large white turbans, and the tall hat of the dervishes (who have a monastery to the east) is mentioned. The Greeks adopted French and Italian costume. The Maronites wore black caps and the Jews red ones. The latter were not allowed to wear the pale yellow turban, which it seems they then wore at Ancona and in Venice.

On the return journey the St. Elmo's fire (S. Hermo) was seen on the masts of the ship, and considered a good omen, as was the shoal of dolphins accompanying the vessel.

These notes comprise, I believe, all that will be found of any particular interest in this volume of travels.

ANCIENT ARROWS IN THE CASTLE OF DAVID.

By Dr. Selah Merrill, U.S. Consul.

About the year 1882 a native of this city, an intelligent old man, told me of a "room full of ancient arrows" that had been "found a few years before in the Castle of David," and he thought that I could obtain some specimens if I asked the military governor for them. I did not do this myself, but sent a person who I knew would introduce the matter cautiously, and the result was that the commander and no one connected with the garrison knew anything about it. Since that time I have asked one person and another, generally old people who might be supposed to know of this "find," but I never learned anything definite, the replies always being, "Yes, we heard something of the kind long ago." People who are now 50 or 60 years old heard their fathers talk about it when they were children.

The matter may not be of much importance, still I have thought it might be of some slight interest to quote from an old volume, long since forgotten, a notice of this circumstance. The work is entitled "The Holy Places: a Narrative of Two Years' Residence in Jerusalem and Palestine." By H. L. Dupuis. London: Hurst and Blackett, 1856; pp. 10, 11:—

"It was during my residence in the country that the flooring of a room adjoining the Tower of Hippicus fell in, and a vault hitherto unknown was discovered underneath containing a store of shafts of arrows. Opinions were divided whether this depôt had been made in very early times or belonged to the Middle Ages. The latter was the more general opinion, and so we pronounced it to be a military deposit for the arms of the Crusaders. These arrows, ready prepared for the head, may have been for the particular service of the garrison of the tower in which they were found, and from being made of deal wood it is not unreasonable to conclude that they must have been weapons used by some northern and perhaps western nation, rather than shafts prepared by an Oriental people of the south, who invariably employ cane, or the stem of the palm leaf (jereed), for this purpose."

Jerusalem,
November 20th, 1901.

Dr. Chaplin writes:—"I very well remember about the ancient arrows found in the Castle at Jerusalem. One or two of them were shown to me in Bishop Gobat's house in the year 1861 or 1862. They were as described by Mr. Dupuis, and I recollect thinking that they looked hardly strong enough to be used against men in armour. Perhaps they were only for sporting purposes."

THE
PALESTINE EXPLORATION FUND.

NOTES AND NEWS.

The Committee have much pleasure in informing the subscribers to the Fund that H. I. M. The Sultan has been graciously pleased to issue an Irâde granting permission to excavate the important site of Gezer. There are still some local difficulties to overcome, but the Committee hope to hear very shortly that Mr. Macalister has commenced work on the mound. It is estimated that the expenditure on the excavations will amount to about £100 a month; and it is earnestly hoped that subscribers, by inducing their friends to join the Fund, will enable this amount to be raised.

In the death of the Rev. John Zeller the Fund loses an old friend, who was always ready to assist its officers, whilst working in Palestine, by every means in his power. In the early days of the Fund he rendered valuable services to those engaged in the survey of Galilee. For 45 years Mr. Zeller served the Church Missionary Society at Nâblus; at Nazareth, where he built the Protestant Church in the face of difficulties that would have daunted most men; and afterwards at Jerusalem, where he had charge of Bishop Gobat's School and Preparandi Institution. During his 17 years' residence at Nazareth he won the esteem of the Bedawî tribes east of Jordan, and during the decade 1860–70 he was one of the few men who could pass everywhere alone and in perfect safety. It is feared that his intimate knowledge of Arab life and feeling has died with him, for excepting the report of a lecture which appeared in the *Q. S.* (April, 1901), he published nothing. On retiring from the C.M.S. Mr. Zeller settled at Wernigerode, in Germany, where

he died on February 19th, aged 71. His wife was a daughter of the late Bishop Gobat.

The Board of Agriculture, on the recommendation of the Director-General of the Ordnance Survey, have very kindly transferred to the Fund the geological specimens collected during the Ordnance Surveys of Jerusalem (1864–5) and Sinai (1868–9). The specimens will henceforward be kept at the office of the Fund.

The Board have also transferred the moulds of the models of Jerusalem and Sinai, and the Committee hope, when arrangements can be made, to issue the models at a greatly reduced price, of which notice will be given in a future number of the *Q. S.*

Dr. Torrance writes from Tiberias:—Owing to the bad harvest last year, and the delay of the rains this year, grain is very dear. Barley is twice the price it was last year.

We have had an unusual amount of malaria this winter, and my own household has suffered a great deal. This is rather curious, as mosquitoes are very scarce. Smallpox has been very prevalent in Nazareth and Safed. We got through the epidemic in Tiberias last year.

A Syrian has applied to the Sublime Porte for a concession to repair and run the hot baths at Tiberias and in the Hieromax (Yarmûk) Valley, repairing roads, &c.

Information has reached the Committee that the *fellahîn* of the *Beit Jibrîn* district have been rifling tombs and ransacking the ancient mounds in the neighbourhood with deplorable results. The whole district has been archæologically ruined; graves have been found everywhere, and valuable gold objects have been looted from many of them. It is understood that some of the results of the robberies have been offered for sale at Jerusalem. Ill-directed excavations of this kind are illegal, and as they cannot fail to result in serious losses to archæology, the Committee trust that travellers and residents in Palestine will do their best to discourage them. The robberies have been brought to the notice of His Excellency Hamdi Bey, the Director of the Imperial Museum at Constantinople, who, it is hoped, will be able to check tomb-robbing in other parts of the country.

Dr. Schumacher writes that Professor Sellin, of Vienna, is to excavate Tell Ta'anuk (Taanach), and that in May the German Palestine Society hopes to start work upon Tell el-Mutesellim (Megiddo-Legio). In this connection we may draw the attention of our readers to the account of the German excavations at Ba'albek, in the present number. This country must not be behind-hand in work of this nature. No land is so rich in historical interest as Palestine, and there can scarcely be a district which would not reveal rich archæological finds, if only the means were provided to carry on the work thoroughly, and at once.

With reference to the excavations carried out by the Armenians on the south side of Jerusalem (*Quarterly Statement*, 1902, p. 2), Mr. Macalister writes:—"The discoveries consist of: (1) An ancient rock-cut house of two or three chambers, partly quarried away at some subsequent time. (2) An extensive building (I should say Roman, or perhaps a little earlier, but there is little to determine the period), partly incorporating the rock-cut house; one room is paved with mosaic. (3) Several cisterns. (4) Three mosaic pavements with guilloche and other patterns. The smaller finds seem limited to Roman pottery, mosaic tesseræ (in great numbers), glass, and late lamps—two of them inscribed, one with the common formula ΦΩC $\overline{\text{XPI}}$ ΦEN ΠACIN, the other with THC ΘEOTΩKOY, which I do not remember seeing before." Through the kindness of the Procurator of the Armenian Monastery, Mr. Macalister has been allowed free access to the site of the excavations, and to make coloured copies of the mosaics, which will be forwarded in due course.

In regard to the "Crusading Inscription," published in the *Quarterly Statement* for last October (pp. 407–409), Dr. Selah Merrill writes:—The little slab in question was not from Acre (p. 409), but was dug up in Jerusalem. I put it on the balcony of my room in the Grand New Hotel in order that it might be cleaned by the rain. One morning a servant was sweeping and he knocked off the slab, which fell to the pavement below, a distance of nearly 20 feet. It fell flat, and was chipped and broken, the fine bits flying in all directions, so that they could not be recovered. This I regret, for a considerable number of letters were lost. What they were I do

not know, for my copy and notes are at my home in America. I was so disappointed that I was on the point of throwing the remaining piece away, but finally saved it. The interesting thing about it is yet to be told. Directly under my balcony a peasant was sitting (squatting) on the pavement eating his breakfast. The stone fell within two feet of his head. When the stone left the balcony I shuddered, for I thought the man would certainly be killed. But he was not hit, and moreover he did not wince or move a muscle except what was necessary to chew his bread and hard cheese. I never saw a cooler feat, not even in my army experience in our Civil War. Had the man been hit on the head the stone would no doubt, by cruel and bloody work, have proved its kinship to the Crusaders.

With reference to the fourth Note on p. 5 of the *Quarterly Statement* for January, Father H. Vincent writes that the dates mentioned were cut only a few months ago. It is regretted that currency was given to an erroneous impression. Father Vincent maintains that the fragment of a large column, mentioned by Dr. Schick (p. 3) as having been found in the ground of the Dominicans, must certainly have formed part of the basilica of Eudocia (Church of St. Stephen).

Mr. T. S. Aldis writes, with reference to the Greek inscription at Sheikh Miskîn in the January number of the *Quarterly Statement* (p. 24), suggesting that the last clause should be rendered :—"Only the surprising thing is that the Divine grace is not a word (as lord, count, &c.), but a letter T." He asks: "Is it not a delicate way of saying that Ulpian was crucified, whether because he was a Christian or a mutineer is left to conjecture?"

The "Journal of the Society of Arts," January 17th, has the following notes on the mineral wealth of Palestine from a recent report of the United States Consul at Eibenstock, on the authority of a German mining engineer in Palestine :—

> "Valuable mineral treasures have recently been discovered in Palestine, so it may be anticipated that the industrial awakening of the Holy Land is no longer a dream. The newly-discovered mineral deposits lie on both sides of the Jordan and the Dead

Sea. The salt deposits of the Dead Sea could be developed into an industry. The waters hold chlor-magnesium, brom-magnesium, and calisalt. Apart from this, there are the bituminous chalk springs of Neby Mûsa, which contain from 30 to 40 per cent. asphalt. The most important of all the deposits is phosphate. As is well known, natural chalk phosphate, phosphorite, and coprolite are necessary for the production of super-phosphates. The latter composition and sulphur form the most important ingredient in the preparation of artificial manure. The immense fields of phosphate to the east and west of the Jordan need only better means of traffic and communication in order to ensure their development."

In the "Sunday School Times," Professor Hilprecht reports that excavations were carried out last year, by the Imperial Ottoman Museum, at Bostân esh-Sheikh, on the left bank of the ancient Bostrenus, about an hour's ride north of Sidon. The task of excavation was entrusted to Makridi Bey, an intelligent young Greek, who has in preparation an account of his discoveries, which will be published in the "Revue Biblique." An ancient Phœnician temple, sacred to the god Eshmun, was discovered, and the trenches yielded about 240 fragments of sculptures, statues, and architectural remains in marble and limestone, vases in terra-cotta, glass vessels, inscribed gems, &c. Though most of these antiquities belong to the Hellenistic period, there are two large Phœnician inscriptions, each of six lines, and three other fragmentary ones which are important for Semitic palæography. The larger ones are duplicate votive inscriptions by Bōd-'ashtart, a hitherto unknown grandson of Eshmun-'azar.

The table of transliteration, which will be found on p. 202, will, it is hoped, be of use to contributors and readers alike. Exact uniformity is impossible, and, indeed, sometimes undesirable, and it need hardly be said that there is no intention of altering geographical and other names that have become thoroughly naturalised though, strictly speaking, incorrect. The transliteration in question is based upon that adopted in the works of the Palestine Exploration Fund, and is practically identical with the system employed in Socin-Benzinger's "Palestine" (Baedeker). It differs but slightly from that approved of by the International Oriental Congress of 1894, and adopted by the Royal Asiatic Society, &c.

The Museum and Library of the Palestine Exploration Fund at Jerusalem have been removed from the room opposite to the Tower of David to the Bishop's Buildings, near the Tombs of the Kings, where the use of a room has been kindly permitted by the Rev. Dr. Blyth, Bishop in Jerusalem and the East. The Museum is open daily, except Sundays, and the Honorary Secretary, Dr. D'Erf Wheeler, will give all information necessary.

The "Flora of Syria, Palestine, and Sinai," by the Rev. George E. Post, M.D., Beirût, Syria, containing descriptions of all the Phaenogams and Acrogens of the region, and illustrated by 441 woodcuts, may be had at the office of the Fund, price 21*s.*

In order to make up complete sets of the "Quarterly Statement," the Committee will be very glad to receive any of the back numbers.

The income of the Society from December 24th, 1901, to March 25th, 1902, was—from Annual Subscriptions and Donations, including Local Societies, £576 4*s.* 8*d.*; from Lectures, £2 12*s.* 6*d.*; from sales of publications, &c., £110 17*s.* 9*d.*; total, £689 14*s.* 11*d.* The expenditure during the same period was £487 6*s.* 0*d.* On March 25th the balance in the Bank was £405 3*s.* 7*d.*

Subscribers in U.S.A. to the work of the Fund will please note that they can procure copies of any of the publications from the Rev. Professor Theo. F. Wright, Honorary General Secretary to the Fund, 42 Quincy Street, Cambridge, Mass.

The Committee will be glad to communicate with ladies and gentlemen willing to help the Fund as Honorary Secretaries.

The price of a complete set of the translations published by the Palestine Pilgrims' Text Society, in 13 volumes, with general index, bound in cloth, is £10 10*s.* A catalogue describing the contents of each volume can be had on application to the Secretary, 38 Conduit Street.

The Museum at the office of the Fund, 38 Conduit Street (a few doors from Bond Street), is open to visitors every week-day from 10 o'clock till 5, except Saturdays, when it is closed at 2 p.m.

It may be well to mention that plans and photographs alluded to in the reports from Jerusalem and elsewhere cannot all be published, but all are preserved in the office of the Fund, where they may be seen by subscribers.

Photographs of the late Dr. Schick's models (1) of the Temple of Solomon, (2) of the Herodian Temple, (3) of the Haram Area during the Christian occupation of Jerusalem, and (4) of the Haram Area as it is at present, have been received at the office of the Fund. Sets of these photographs, with an explanation by Dr. Schick, can be purchased by applying to the Secretary, 38 Conduit Street, W.

Branch Associations of the Bible Society, all Sunday Schools within the Sunday School Institute, the Sunday School Union, and the Wesleyan Sunday School Institute, will please observe that by a special Resolution of the Committee they will henceforth be treated as subscribers and be allowed to purchase the books and maps (by application only to the Secretary) at reduced price.

The Committee will be glad to receive donations of Books to the Library of the Fund, which already contains many works of great value relating to Palestine and other Bible Lands. A catalogue of Books in the Library will be found in the July *Quarterly Statement*, 1893.

The Committee acknowledge with thanks the following :—

"Recueil d'Archéologie Orientale." Tome IV, Livraisons 24–26 (conclusion). *Sommaire* :—§ 66. Lecture rectifiée des inscriptions de Waddington. § 67. Nouvelles observations sur la mosaïque hébraïque de Kefr Kenna. § 68. Un thiase palmyrénien. § 69. Le dieu nabatéen Chaï' al-Qaum; additions et rectifications; table des figures dans le texte; table des planches hors texte; table des matières. From the Author, M. Clermont-Ganneau.

"Al-Mashrik: Revue Catholique Orientale Bimensuelle." Among the more important contents are :—"Les Soubbas ou Mandéens (suite): leur pays, leur nombre, leur langue," by P. Anastase Carme; "Les Études Arabes en Europe au XVI^e^ siècle (fin)," by P. H. Lammens; "La Consécration épiscopale chez les Melchites d'après un ancien Manuscrit," "Le Calendrier de l'Eglise d'Antioche au XI^e^ siècle *d'après al-Birouni*," and "The History of Printing in the East," by P. L. Cheikho; "An Historical Sketch of Carpentry in the East," by J. G. Thabet; and "Ancient Convents of Lebanon," by the Abbé I. Harfouch.

"The Progress of Zionism," and "Palestine and Her Critics." From the Author, Herbert Bentwich, LL.B.

For list of authorised lecturers and their subjects write to the Secretary.

Subscribers who do not receive the *Quarterly Statement* regularly are asked to send a note to the Acting Secretary. Great care is taken to forward each number to those who are entitled to receive it, but changes of address and other causes occasionally give rise to omissions.

Form of Bequest to the Palestine Exploration Fund.

I give to the Palestine Exploration Fund, London, the sum of _____ to be applied towards the General Work of the Fund; and I direct that the said sum be paid, free of Legacy Duty, and that the Receipt of the Treasurer of the Palestine Exploration Fund shall be a sufficient discharge to my Executors.

*Signature*_____

Witnesses _____ _____ _____

Note.—*Three Witnesses are necessary in the United States of America; Two suffice in Great Britain.*

While desiring to give publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

TREASURER'S STATEMENT.

During the year 1901 the receipts from all sources amounted to £1,936 14*s.* 9*d.*, which is recorded under the following headings:—

	£	*s.*	*d.*
From Donations and Subscriptions	1,464	1	3
.. Lectures	10	5	4
.. Sales of Publications	462	8	2

At the close of 1900 the balance in the Bank, which included £10 8*s.* 0*d.* for subscriptions paid in advance, was £291 7*s.* 11*d.*, making the total available £2,228 2*s.* 8*d.*

It is to be regretted that the receipts for the year have been seriously diminished, probably by the causes which have affected so many societies.

The Donations and Subscriptions vary in amount. The highest being £20; the lowest, 5*s.*

The amount received for Lectures came from America. The sales from publications are made up from Maps, £150 8*s.* 4*d.*; from Books, £274 3*s.* 4*d.*; from Photographs, Casts, and Lantern Slides, £37 16*s.* 6*d.*

The expenditure during the same period was—on Exploration, £448 4*s.* 3*d.*

Twelve months have now nearly elapsed since the Committee applied for a new firman to explore that huge mound, the Canaanite city, Gezer, situate on the borders of the Shephelah, between Jerusalem and Jaffa, and they are anxiously awaiting the Irâde granting the necessary permission.

In the interval Dr. Bliss and Mr. Macalister have been fully occupied in the preparation from their notes and drawings illustrating the recent explorations in and about the Tells Judeideh, Zakarîya, es Safi, and Sandahannah. This Memoir about to be published will give detailed accounts of the two years' work under the now expired firman for that district, and the drawings represent more than a thousand objects of pottery, bronze, &c., all drawn to scale, and serving to elucidate the periods of time during which these sites were occupied.

On printing and binding, including the *Quarterly Statement*, £393 5*s.* 9½*d.* The expenditure under this heading is mainly on the production of the Journal itself, which is issued free to all subscribers of half a guinea and upwards.

On maps, lithographs, illustrations, photographs, casts, and lantern slides, the total under these headings amounting to £170 19*s.* 9½*d.*

On advertising, insurance, stationery, and sundries, £59 11*s.* 11*d.*

The postage on the *Quarterly Statement*, all book and map packets sent out amounted to £121 17*s.* 2*d.*—£70 3*s.* 6*d.* of this sum being incurred for the postage of the Journal.

On the management, which includes salaries, wages, rent of office and museum, light and coals, £619 5*s.* 2*d.*

The liabilities at the end of 1900 were reduced by £250.

The balance in the Bank on December 31st, 1901, was £164 8*s.* 7*d.*

The amount received through our Hon. General Secretary, Professor Theodore F. Wright, from America, was from—

	£	s.	d.
Subscriptions	205	15	6
Lectures	10	5	4
Sales..	27	13	7
Total	£243	14	5

Assets.	£	s.	d.
Balance in Bank, December 31st, 1901.. ..	164	18	7
Subscriptions in arrear..	349	11	0
Also the stock of Publications in hand, Surveying Instruments, Show Cases, Furniture, &c.			
The valuable library and unique collection of antiques, models, &c.			

Liabilities.	£	s.	d.
Printers' Bills and Current Expenses	427	5	11

Walter Morrison, *Treasurer.*

STATEMENT OF RECEIPTS AND EXPENDITURE FOR THE YEAR ENDING 31ST DECEMBER, 1901.

Receipts.	£	s.	d.
To Balance in Bank 31st December, 1900, including £10 8*s.* 0*d.* Subscriptions paid in advance for 1901	291	7	11
Donations and Subscriptions	1,464	1	3
Proceeds of Lectures	10	5	4
Sales of Books, Maps, Photographs, Casts, and Lantern Slides	462	8	2
	£2,228	2	8

Expenditure.	£	s.	d.
By Exploration..	448	4	3
Printing, Binding, including the *Quarterly Statement*	393	5	9½
Maps, Lithographs, Illustrations, Photographs, Casts, and Lantern Slides	170	19	9½
Advertising, Insurance, Stationery, and Sundries	59	11	11
Postage of the *Quarterly Statement*, Books, Maps, Photographs, Casts, and Lantern Slides	121	17	2
Salaries and Wages	354	14	0
Office Rent, Gas, Coals	264	11	2
Liabilities paid off..	250	0	0
Balance in Bank 31st December, 1901, including £37 0*s.* 7*d.* subscriptions paid in advance for 1902	164	18	7
	£2,228	2	8

Examined and compared with Vouchers and Pass Books and found correct.

Walter Morrison, *Treasurer.*

REPORTS BY R. A. STEWART MACALISTER, M.A., F.S.A.

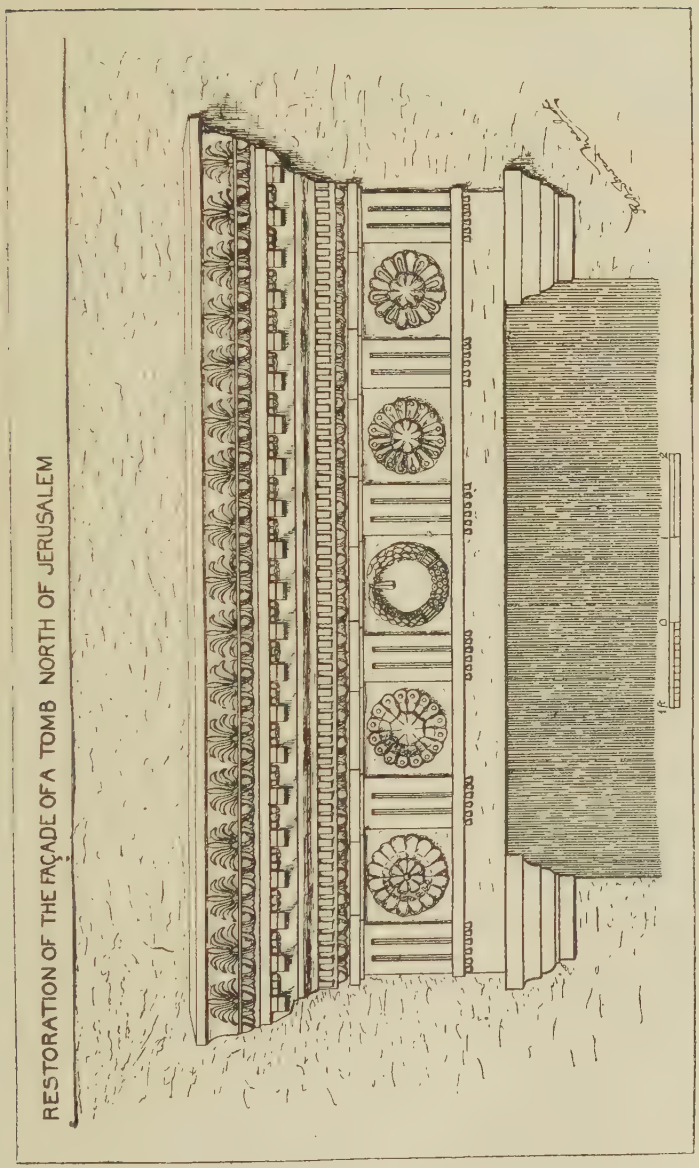
I.—The Newly-discovered Tomb North of Jerusalem.

Père Hugues Vincent of Jerusalem rarely leaves any gleanings for his successors after he has examined an ancient monument, and there is little to add to his excellent article upon this fine tomb in the "Revue Biblique" (July, 1901, p. 448). There seems to me, however, to be one detail on which a further suggestion might be made. On the wall of the vestibule are several crosses, nearly all of which will be found to be accompanied with Α—ω on the sides of the stem (Père Vincent has recorded one only with these letters, but I think he will find at least four). In two of these the order of the letters is reversed, the ω appearing on the left hand, the Α on the right hand side of the stem of the cross. This very unusual arrangement suggests another reading to Père Vincent, who seems half inclined to regard the badly made ω as a Φ.

I cannot follow this reading, and feel no doubt that the scribbler who cut these crosses intended the symbols *alpha* and *omega*. The reversal of the letters is capable of being easily comprehended if we call up the picture of a pious Hebrew convert, able to write his own national language, but with no knowledge of the Greek tongue beyond the alphabet.[1] Such a person would have no idea that an order of writing from right to left involved a reversal of the symbols. The crosses in which the letters appear in the correct order may have been executed by another person with more knowledge, or by the same man after his eyes had been opened a little.

On the accompanying plate, an attempt has been made to restore the fine façade of this tomb, according to the remaining

[1] [There is an interesting parallel to this in Halévy, "Revue Semitique," 1901, p. 370. Cuneiform is written from left to right, Phœnician from right to left. Now, on one of the Amarna tablets, which, as Halévy believes, were written by Phœnician scribes, the signs for *ag-ga* once appear as *ga-ag*, the scribe in a moment of inadvertence writing from right to left in accordance with the usage of his native language.—Ed.]

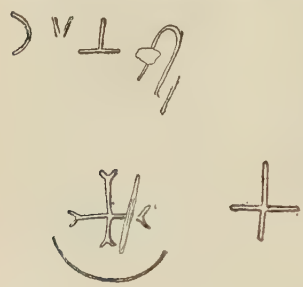


RESTORATION OF THE FAÇADE OF A TOMB NORTH OF JERUSALEM

indications. The projection of the cornice is the only purely hypothetical part of this restoration; enough remains of all the other members to make restoration certain, except, possibly, in the case of the row of honeysuckles in the top member; of this, the middle of one flower alone is left.

II.—Inscription from the Wâdy Samâr.

I forward a sketch of the remains of an inscription I have noticed on a quarry scarp on the south side of the Wâdy Samâr, north of the Tombs of the Judges. The letters are Greek, but the remains are too meagre to be decipherable. The face with the remaining letters is scaled away. Close by is a tomb which has been destroyed by quarrying.



III.—The Ancient Necropolis at Kerm esh-Sheikh.

At the request of the Committee I examined this field, hoping to plan the tombs contained therein. I found, however, that all but two are closed up and inaccessible. These are Nos. 11 and 12 in Prof. Clermont-Ganneau's plan (*Quarterly Statement*, 1874, p. 96). Of the first of these, only one chamber can be entered; it is a commonplace cell with two sunk bench-graves, one on each side of the central passage. The second consists of a circular shaft, about 6 feet deep and 12 feet 6 inches in diameter, which has been used as a limekiln. On the south side is a doorway, 2 feet 4 inches across, leading into a rectangular chamber, 9 feet 8 inches north to south, 4 feet 7 inches east to west, and 5 feet high. The chamber is now plastered.

There are sunk depressions in the soil all over the field, evidently covering the shafts of tombs; and evident traces of mined chambers in the rock-scarps, on each side of the road running between Kerm esh-Sheikh and the city wall are visible.

IV.—Further Jar-Handles with Rhodian Stamps.[1]

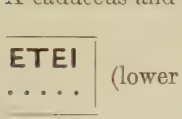
Jar-handles, with the following stamps, have recently been picked up near Beit Jibrîn :—

1.

2.

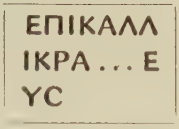
in large, bold letters.[2]

3. A caduceus and rose in rectangular frame : no inscription.

4. 

(lower line rubbed).

5.

6. 

V.—The "Egyptian Tomb" at Silwân.

I visited this most interesting little monument on January 21st, and made a careful study of the remains of the inscription over its door, found by Prof. Clermont-Ganneau.[3]

I cannot understand on what grounds its authenticity, as an actual old Hebrew inscription, has been called into question ; there does not seem to me any room for doubt that Prof. Clermont-Ganneau is right, and that we have the terminal letters (I should say probably בר) of an inscription destroyed by enlarging the door.

I have not seen in any account of the tomb a reference to the initial letter of the inscription, part of which still remains at the right-hand end. This is a ל, and is represented by the horizontal stroke at the bottom, and what seems to be the tip of the oblique upright stroke of the old Hebrew form of the letter (/). The rest is cut away.

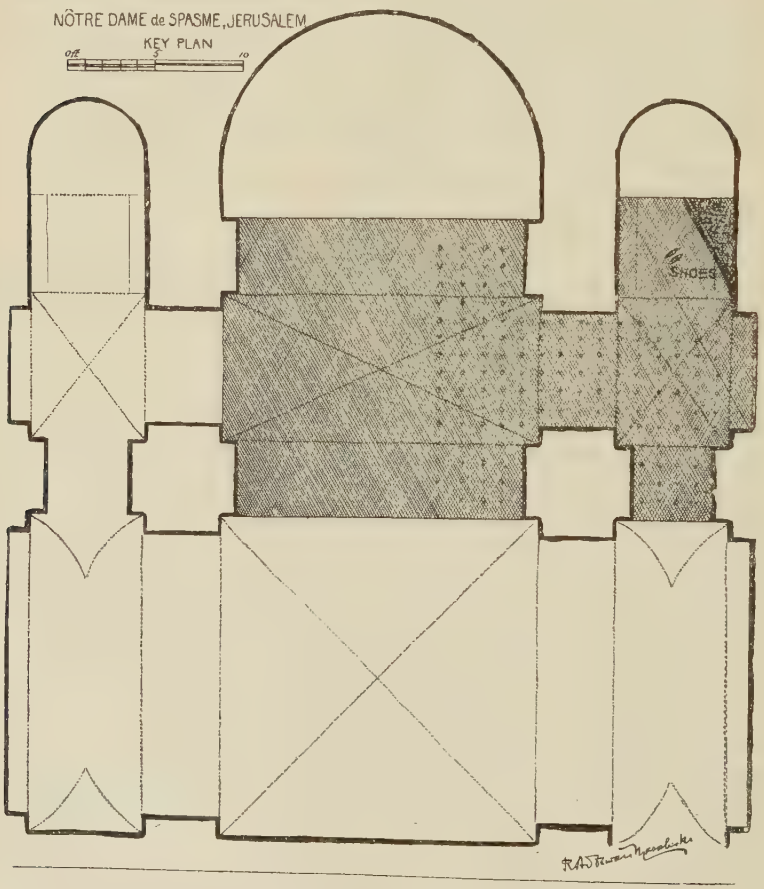
[1] See *Q.S.*, 1901, pp. 25, *et seq.*, 114, 124, *et seq.*, 394, *et seq.*

[2] [If correct, this is the most striking of the readings here published, on account of its curious identity with the Carthaginian name Hanno.—Ed.]

[3] "Archæological Researches in Palestine," vol. i, p. 313, *et seq.*

VI.—The Mosaic in the Church of Nôtre Dame de Spasme, Jerusalem.

Here is shown the plan of the ancient Church of Nôtre Dame de Spasme, at the first corner of the Via Dolorosa, which will form the crypt of a handsome new building at present being erected by the Armenian Catholics.



The portion of the ancient church covered with mosaic is indicated on the plan. This is almost entirely a commonplace alternation of simple dots, alternately lozenge- and V- shaped,

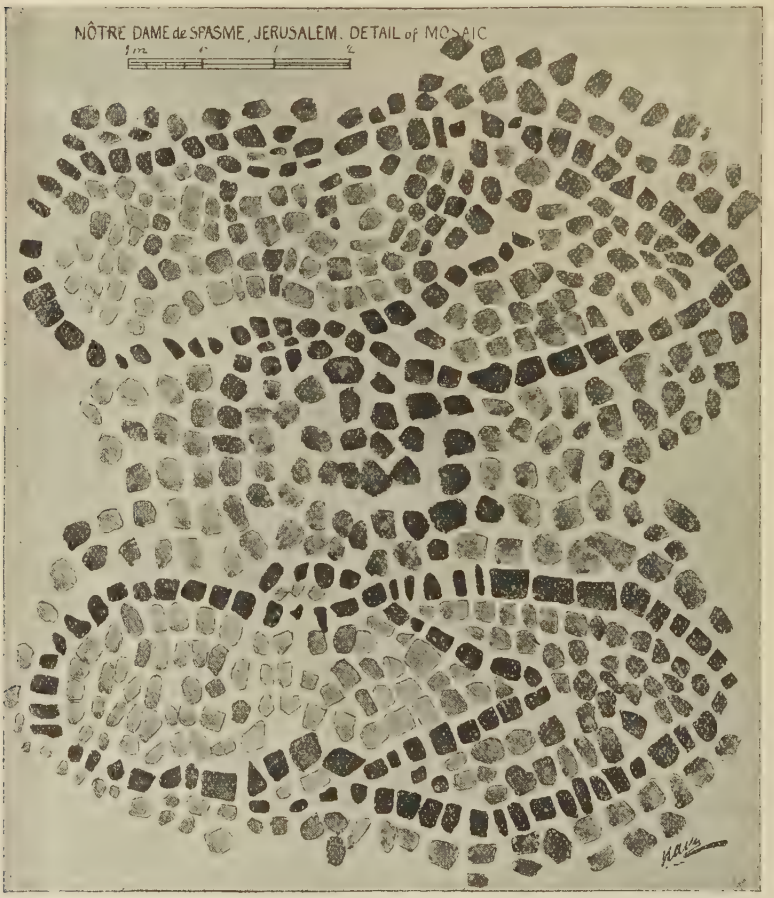
outlined in black and filled in with red tesseræ. At the corner of the southern apse, however, is the corner of a square filled with a guilloche of black, red, and yellow tesseræ, in front of which are two shoes outlined in black and filled in with red.

It is obvious that this square and the shoes belong to a mosaic older than the church, and older than the mosaic covering the rest of the church. The work is finer, and the difference in the tesseræ perfectly clear on inspection of the original. There is,

moreover, an intermediate period, represented by a plain surface of yellow tesseræ between the fragment containing the shoes and the surface ornamented with dots. That the fragment is older than the church, and not merely a portion of its original pavement, is demonstrated by the fact that the greater portion of the design is covered by the present wall. The portion not indicated on the plan is concealed.

The church marks the traditional site of the meeting of Christ and His mother; and there is little doubt that the shoes mark the

traditional foot-prints of the one or the other. Had the square been in front of the shoes it might have marked the standing-place of Christ; being behind we are left without data to aid



us in conjecturing its purpose, or the reason of its peculiar orientation.[1]

[1] Father Morrison, whose name is well known at Jerusalem, informs me that in the Sacristy of the Church of Nôtre Dame de Beaucaire, joined by a bridge to Tarascon, he has seen a little shoe, said to have belonged to the Virgin, which in size and appearance resembles that shown on the mosaic copied by Mr. Macalister.—C. W. W.

THE SCULPTURED CAVE AT SARÎS.

In the *Quarterly Statement* for 1889, p. 184, Mr. Hanauer has given a short account of a cave near Sarîs, with two figures sculptured in relief, and the remains of an inscription which had been destroyed by a fellah before the cave attracted scientific attention. A sketch of one of the figures and of the surviving letters of the inscription is given on p. 185. In the following volume (1890, p. 71) is a further account, also by Mr. Hanauer, of the cave, with an enlarged sketch of the head of the same figure. Two other notes upon the cave appear in the same volume: the first by Professor Sayce (p. 44), asking for squeezes of the inscriptions (on which, unfortunately, I can find no subsequent report), and the second by Dr. Hutchinson (p. 332), making a suggestion as to the interpretation of the figures. Lastly, in the volume for 1892, p. 196, is a note with a photograph, upon pottery found by the Freemasons of Jerusalem in the cave.

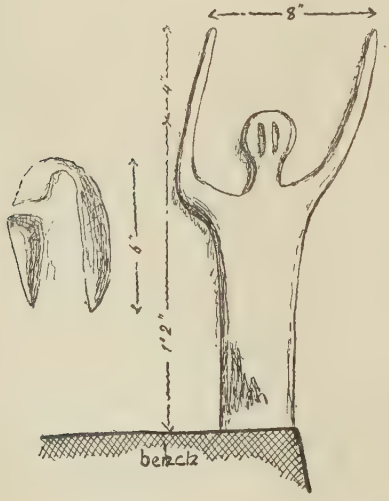
I visited this cave on February 15th, and made a careful study of it. Unfortunately, it has suffered severely since it was examined by Mr. Hanauer. The fever for antiquity-hunting, which in recent years has developed to an alarming extent in Palestine, has spread to Sarîs, and this cave has been ransacked. I found two young men, who claimed to be sons of the proprietor of the cave, who told me that they had been searching for treasure: an unlucky stroke by a pick had brought down all of the portion of the east wall containing the figure drawn by Mr. Hanauer, and not a single fragment of it is to be seen, either on the wall or among the single fragments of stone strewn on the floor of the cave. I suspect, however, that the destruction of the figure was not accidental, as my guides would have me believe, but intentional—perhaps on account of the Moslem hatred of images, for the second figure has been attacked also, and an evident attempt, which was fortunately suspended, made to cut it out. I fear, however, that the attempt will probably be resumed sooner or later, and the figure will be either destroyed or removed and sold. Though I examined minutely every square inch of the wall, I could find nothing like the marks drawn by Mr. Hanauer, of whose transcript I was provided with a copy. It is to be hoped that the squeeze mentioned (*Quarterly*

Statement, 1890, p. 44) is still in existence, for the characters, if anything, are Old Hebrew.

Questioned as to what they had found in the cave, my guides told me that they had obtained lamps, fragments of pottery (principally saucers), a stone "shaped like a bell," and a stone box. The first of these stone objects may have been a pounder or hammer-stone; the second, no doubt, was an ossuary, a manual demonstration of the size of the object, which thay gave me, was sufficient to convince me of this. There is still a good deal of earth in the cave, intermingled with bones.

All the pottery shown in Mr. Lee's photograph above referred to, is characteristic of the archæological strata which we have now learned to associate with the later period of the Jewish monarchy.

The chief interest of the cave lies in the two curious sculptured figures, and it is fortunate that the sketches illustrating Mr. Hanauer's papers have preserved the appearance of the figure now destroyed. To complete the account I append a sketch of the second figure; there was not sufficient light to photograph it satisfactorily, and I had no material for making a squeeze.



Mr. Hanauer, in referring to this latter figure (*Quarterly Statement*, 1889, p. 185), says: "The legs, if it has any, must be dug for." As a matter of fact, there are none—the figure is half-length only, and a bench of uncut rock (like the shelf of a tomb-arcosolium) butts against the place where the legs would have been.

The interpretation of the figures is a matter of considerable difficulty, and depends upon the period to which they are to be assigned. The objects found in the cave may be taken as an indication of a minor limit of its date, for it is highly improbable that they were already relics of antiquity when they were deposited. The ossuary is not of great importance in this connection, for it

does not appear that this particular class of articles of tomb-furniture is of high antiquity. The only ossuaries that can be dated with certainty are those whose period is indicated by inscriptions; and all that have been found inscribed bear either Greek or square Hebrew lettering. The earlier Jewish tombs seem to have been provided with ossuary chambers for the reception of the bones of decayed bodies; the portable stone coffer was an invention of a later date. More to the point, in the dating of the cave under discussion, is the pottery represented in Mr. Lee's photograph. This belongs to the period of the Jewish monarchy, and it follows that the cave is, at latest, to be assigned to that period.

As to the figures, it might be inferred that, being *in relief*, they are necessarily of the same date as the walls on which they are cut. But this is not absolutely certain. Careful observation shows that, though there is no formal sunk panel surrounding the surviving figure, yet it is actually in *cavo-rilievo*—that is to say, the outer surface of the sculpture does not project beyond the outer surface of the wall, the relief being obtained by cutting away the background. Evidently the indication of date is as indefinite in such a case as in that of an incuse sculpture. I have added to the sketch of the surviving figure an appearance as though another figure had been blocked out and left incomplete; it is to the west of the surviving figure, and five inches from it. On the west wall are two deep lines, enclosing a space approximately in the form of a human figure, which might be the beginning of another relief. Though I studied these two marks very carefully, I was unable to make up my mind whether or not they were mere pick-marks; it may be admitted that there are no other pick-marks elsewhere upon the walls of the cave quite like them.

Dr. Hutchinson, from an examination of the sketch illustrating Mr. Hanauer's second communication, suggests that these figures represent the Crucifixion. This is a natural explanation, but it is open to several grave objections. There is no indication of a cross. The arms are not outstretched sideways (as might be inferred from the sketch referred to), but upwards; and though representations of the Crucifixion with arms stretched upwards are not unknown, they are so rare that if another explanation be forthcoming it is to be preferred. The eight strokes, taken by Dr. Hutchinson to represent a nimbus, are evidently merely indications of the back-

ground by the artist's pencil, and do not represent actual marks in the sculpture; this is clear from an examination of the previous sketch (*Quarterly Statement*, 1889, p. 185), apparently by a different hand, and certainly drawn on a different occasion. In the latter sketch, the marks in question do not appear.

The odd leaf-shaped face shown in the sketch (*Quarterly Statement*, 1890, p. 71) I would explain as an indication of the nose (by hollows on each side between nose and cheeks) with a fracture above (or possibly an indication of eyebrows (?)). The mouth is not shown. The face in the surviving figure is even ruder.

The most cogent argument against regarding the sculpture as Christian lies in the absence of crosses elsewhere on the walls of the cave. An *argumentum e silentio* is usually unsatisfactory, but traces of the habit which the early Christians of Palestine had of cutting crosses upon wall surfaces are so universal, that the absence of such symbols is presumptive evidence of the absence of early Christians.

Professor Sayce (*Quarterly Statement*, 1890, p. 44) compares the sculpture with the "proto-Phœnician rock-sculpture" he had visited near Tyre. This probably means the Kânâ figures, illustrated and described by Herr Schumacher later in the same volume (pp. 259–264), and pronounced to be of later date than had previously been supposed. If the Kânâ figures be intended by Professor Sayce, the resemblance seems rather superficial: the Kânâ and Sarîs figures differ considerably, both in attitude and in technique.

Much closer is the resemblance between these figures and the curious sculptures on the wall of the cave known as 'Arâḳ el-Mâ, near Beit Jibrîn; it was the desire to compare the two that first attracted me to the Sarîs cave. A sketch of the Beit Jibrîn sculpture will be found in the "Memoirs," vol. iii, p. 267. In these figures the arms are outstretched, not upraised, and the attitude is much more suggestive of a crucifixion than in the case of the Sarîs reliefs. It is quite possible, however, that the Sarîs figures may disturb this explanation. If they be non-Christian in period and purpose, the Beit Jibrîn figures may have been originally similar, and may have been accepted and preserved by later Christian occupants of the Beit Jibrîn caves on account of their resemblance to crucifixes.

The resources of Jerusalem libraries are too limited to enable me to find further examples of similar sculpture with which to compare the Sarîs figure. A very rude votive stele from Carthage,

figured in Perrot and Chipiez "Phœnicia," vol. i, pp. 54, 80, shows two figures in the same attitude, with hands upraised, presumably in an attitude of prayer. This comparison, to my mind, suggests the direction in which we are to look in determining the origin of the Sarîs cave.[1]

Till all the earth can be cleared from the cave, it is impossible to say with certainty whether it was originally intended as a tomb-chamber, or whether the bones strewed through it and the ossuary are evidences of a secondary appropriation. In the meanwhile, I can only state my impression that the latter is the true alternative.

R. A. S. M.

EL-EDHEMÎYEH (JEREMIAH'S GROTTO).

I SEND the following notes about the hill above Jeremiah's Grotto[2]:—

It is a knoll of limestone, with well-marked strata dipping perhaps 30 degrees, more or less, south to north, and about the same west to east. The rounded top of the hill is made by Moslem interments, and except two ruined welys—one of them reduced to foundations—there are no old buildings to be seen on it. The rock crops to the surface at the north-west side of the mound (towards the Dominican convent). The maximum depth of earth on the top I should estimate at about 10 feet. If the earth could be cleared away I should not be surprised to find part of the rock surface on top artificially flattened towards the south side of the hill; a small shelf of exposed rock, about 1 foot across, on the top of the scarp containing the cave popularly called the "Skull's Eye," has the appearance of being the edge of a rock-cut wine-press or threshing floor.

The excavations, &c., on the face of the hill-slope are as follows, in order, starting from the corner next the Dominicans:—

(1) A projecting boss of rock with a wine-press (?) of three vats with channels, sunk in its upper surface.

[1] [A very similar figure from Idalion is represented in Ohnefalsch-Richter, *Kypros*, taf. li, No. 6.—ED.]

[2] The modern Arabic name is to be preferred as being at once short and non-committal.

(2) A projecting boss of rock cut (?) into the form of a slightly pointed arch. No signs of tool-marks are to be seen upon it, so it may be natural; but I am under the impression that it is probably a section of an artificial cave, of which the rest has fallen in.

(3) A scarp running round the south-west corner of the hill. On the west side it is 25 feet 5 inches long (not straight, but rather convex), on the south 67 feet, ending in the cave called the "Skull's Eye." The maximum height (in the neighbourhood of this cave) is about 11 feet, and here it overhangs so that the top projects 2 feet 4 inches beyond the bottom of the scarp. It is probably merely a quarry, for there are evident traces of quarrying in the immediate neighbourhood of this scarp. I cannot detect any sign that would give a clue to its age.

(4) At the south-west corner of the scarp, a cave of two small irregular chambers, certainly artificial, though for what purpose is not clear. There is a sort of shelf on the right-hand side of the entrance to the second chamber, possibly a rude arcosolium, though this is far from certain.

(5) Also at the south-west corner, a scarp running out from the main scarp, and at a lower level; also certain channels, evidently to be compared with the grooves cut between blocks in "Solomon's" and other unfinished quarries. The rough sketch plan will give an idea of the way all these features are disposed.

(6) The so-called "Skull's Eye" (the left-hand or larger eye). Unquestionably an ancient cistern, though every scrap of plaster has been removed from the walls. There is a square hole in the top (blocked up) for dipping buckets. In the north-east corner a small subsidiary water store has been formed of masonry, cemented inside: no doubt a later construction. On the west side is a small domed chamber, communicating with the main chamber and with an independent opening under the rock scarp. The main chamber is 8 paces north to south by 9 paces east to west. In modern times the cave has been used not only as a temporary dwelling, and the walls are smoke-blackened in consequence, but also as a refuge

for goats. The south wall was chiselled away when the scarp outside was formed, and the "Eye" thus laid open. From the weathering I should strongly doubt if this happened so much as 2,000 years ago; and, therefore, any resemblance the face of this hill may bear to that of a skull is an aspect later than the time of the crucifixion.

(7) A rather risky scramble along a narrow ledge conducts over the precipitous face of the rock to the second "Eye." It is much smaller than the first, being just high enough for me to stand upright in it. The plan is of this shape:—

In the floor, at A, is sunk a very curious little cistern.

The depth (above the stratum of rubbish covering the floor) is 2 feet. Water is conveyed to it by a small channel running along the face of the rock between the "eyes." But it is far from clear why a cistern was cut in so inaccessible a place, and why so small a receptacle for water should be cut anywhere.

(8) The last cutting on the hill is Jeremiah's grotto and its attendant scarps. A very good account by Dr. Schick, with plans and sections, is given in the *Quarterly Statement* for January (pp. 38–42). On this I forward the following comments: —(*a*) The original entrance to the grotto was apparently rather low, and of uniform height. Two great faults in the rock above the entrance have weakened it, and part of the scarp above the entrance intercepted by these has fallen. (*b*) The name of the buried Sultan is Ibrahîm el-Edhem, and the saint's name seems to be Jeremiah, not Lazarus. (*c*) Under the square recess in the west of the cave is a small sinking, apparently for the butt-end of a beam, the other end of which fitted into a corresponding sinking in the neighbouring pier. This beam probably supported a ladder or staircase by which access was gained to the recess; the latter may well have been the bed of some hermit or recluse. Lower still, underneath the sinking first mentioned, is a tetherhole, *i.e.*, a niche with a bridge of rock left spanning it to secure an animal. This may be modern.

(*d*) The square hole "which has never been examined" does not look important enough to justify the risk involved in being let down to it by ropes. There seems to be a broken cave of some sort in the surface of rock above the finished scarp. Above the scarped surface is a stratum, perhaps 8 or 10 feet deep, of small loose amorphous limestone, its face receded some way behind the face of the scarp. The shelf thus formed is spanned by two arches of rock which (like the other arch already described) may be sections of a ruined chamber. To the south of these is the entrance to a small cave.

R. A. S. M.

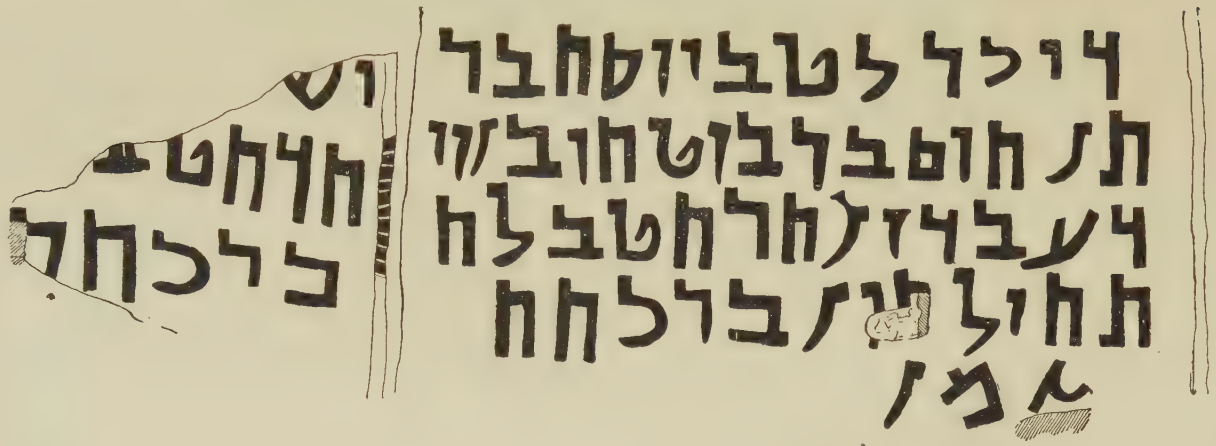
ARCHÆOLOGICAL AND EPIGRAPHIC NOTES ON PALESTINE.

By Professor Clermont-Ganneau, M.I.

13. *Fresh Remarks on the Hebrew Mosaic of Kefr Kenna.*—Thanks to the kindness of Father Prosper and of Father Léonard d'Estaires, of the Order of the Franciscans, I have just received an excellent tracing (made directly from the original) of the Hebrew inscription which I discussed in a preceding note (*Quarterly Statement*, 1901, pp. 374 *et seq.*). I give here a reproduction of it, which fortunately completes that made from the photograph (*ib.* p. 251), which, as I have already said, leaves much to be desired.

We are now in a position to estimate the measurements of the text; the maximum length of the part preserved is 0·85 m., the letters are, on an average, 0·05 m. in height. The copy fully substantiates the readings I had proposed, notably in certain cases where there had been reason for doubt:—בנוי (l. 2), טבלה (l. 3), תהי להון (l. 4), ברכתה (l. 8). The patronymic in l. 2 seems to be בר בוטה rather than בר ביטה.

Underneath the fourth line three letters may be distinguished which were not to be seen upon the photograph. The first is mutilated, possibly the remains of an *aleph*. This, with the two remaining letters, which are perfect, gives us the reading, (א)מן, "Amen." This word, placed, as it is, by itself, at the foot of the first column, may be a clausula, indicating that the inscription was



דיכר לטב יוסה בר
תנחום בר בוטה ובנוי
דעבדין הדה טבלה
תהי להון ברכתה
(א)מן

י(ש)[?] . . . . . .
הדה ט(ב)[לה][?] . . . .
ברכתה . . . . . .

In good remembrance; Yôseh, the son of Tanḥûm, the son of Bûṭah (?), and his sons, who have made this T-B-L-H; may it be for a blessing to them. Amen. . . . . This T-(B-L-H ?) . . . blessing . . .

made up of at least two portions, the second part beginning on the column following.

The inscription is exceedingly interesting for the history of Hebrew epigraphy, and this copy enables us to form an opinion of the palæography of the text, which was hitherto difficult on account of the deficiencies of the photograph. The characters are boldly and neatly made. Not to mention other details, it will be noticed that the *he* is not in any way distinguished from the *ḥeth*, contrary to what has been observed, for example, in the alphabet of the ossuaries. On the other hand, the *daleth* and the *resh* are carefully differentiated with only one exception, viz., הדה (l. 3), although it is not impossible that this anomaly is due to an imperfection in the copy, or to some flaw upon the mosaic. At all events, it is certainly owing to one or other of these causes that the *tav*, occasionally deprived of the little stroke at the extremity of the left leg, appears to be identical with *he* or *ḥeth*.

Meanwhile, Messrs. D. H. Müller and Sellin have published a monograph on this inscription which I have been unable to procure.[1] Their reading of ll. 3–4 is as follows:—

דעבד תסרה טבלה תחיל בא באב הת ··· אמן

"Who made the mosaic-slab. He began on the first of (the month) Âb, finis[hed] . . . Amen."

M. Halévy,[2] more fortunate than myself in obtaining a copy for review, whilst accepting this rather strange reading, proposes to restore l. 4 thus:—

תהילתה באלהא, "Praise be to God!"

It is hardly necessary to say that these three scholars have pursued the wrong route, as is proved conclusively by the new and unambiguous document which I am discussing.

[1] D. H. Müller and E. Sellin, "Die hebräische Mosaikinschrift von Kafr Kenna, mit einer Tafel," Vienna, 1901. I do not know either the name of the publishers or the exact date of this publication. ["Sitz. ber. d. Kais. Ak. d. Wiss. zu Wien," 1901, xv; June 12th.—Ed.] I have every reason to think, however, that it is later than my first communication to the "Académie des Inscriptions" (Comptes-rendus, November 2nd, 1900, p. 354, *seq.*), and the printing of my first notice in the *Quarterly Statement*. In this case it is to be regretted that Messrs. D. H. Müller and Sellin did not know of this notice of mine, which even then gave the true reading of the inscription, and would have enabled them, I venture to think, to escape the errors into which they have fallen.

[2] "Revue Sémitique," 1901, Oct., p. 374 *seq.*

14. *Baal-Bosor or Baalkosor?*—Through the courteous instrumentality of M. van Berchem I have just received from Professor Brünnow the squeeze of the inscription at Sûf, which I investigated in a preceding note (*Quarterly Statement* for January, pp. 15 *et seq.*). Although incomplete, this squeeze contains two of the doubtful names there discussed: that of the author of the dedication, and the name or surname of the god.

In regard to the first, the reading Ἀμέραθος, which I had indicated as being possible, rather than Professor Brünnow's Ἀμέγαθος, is now absolutely verified; the fourth letter is not γ but ρ squared at the top.

In regard to the divine name, or, to be more exact, the second element of the name, viz.: 𐤊𐤅𐤒𐤅𐤓𐤅𐤉 or 𐤁𐤅𐤒𐤅𐤓𐤅𐤉, the squeeze does not remove the doubt attaching to the first letter. It is difficult, I confess, to see in it a 𐤁; on the other hand, however, the reading 𐤊, too, is not without difficulty, and I am not surprised that Professor Brünnow only marks the 𐤊 as a possible reading. If, in spite of everything, it is really a 𐤊, the possibility must always remain that the stone-cutter, notoriously careless, has made some error, and has engraved a 𐤊 instead of a 𐤁, which, it may be presumed, was on his copy.

If, notwithstanding this, anyone, declining the suggested Bostra, should wish to retain the reading Βεελκωσώρῳ, it will be necessary to return to some of the combinations which I had previously rejected tacitly as scarcely plausible. Such a one, for example, is that which naturally suggests itself at once, and which consists in connecting the word with the Hebrew root קצר, which, amongst others, has the meaning "to reap," and in recognising in the name (with Lieut.-Colonel Conder[1]), Zeus Helios Baalḳoṣor, a kind of solar deity who presided over the harvest. Such a conception, however, is more decidedly Hellenic than Semitic. One may even be tempted, moreover, to suggest a comparison either with the pre-Islamic deity قيصر[1], "Oḳaiṣir,"[2] or with the Phœnician god Χουσωρ (reading uncertain) of Philo of Byblos. A more specious suggestion would be to connect the name Κωσωρ with the ancient Cossura (the mod. Pantellaria), an island situated

[1] From information supplied to me by the Editor.

[2] On this god, and on his possible origin, *see* my "Recueil d'Arch. Orient.," ii, p. 247; iii, p. 280.

between Sicily and the Carthaginian coast. In support of this it may be pointed out that in this case it would furnish us with a geographical designation which, as analogy shows (*see* above p. 19), is precisely what is to be expected here; but this is going rather far afield to find a homonym to a god from Central Syria.

15. *The Depository of Ancient Arrows in the Castle of David.*—To the interesting question raised by Dr. Selah Merrill in the last number of the *Quarterly Statement* (p. 106), I happen to be in a position to bring to bear my personal testimony supported by something more substantial than mere "hearsay" evidence.

When I was in Jerusalem in 1869, I was fortunate enough to obtain a couple of arrows from a find made some ten years or so previously in the fortress of David. I made a present of one to a friend whose name I have forgotten, the other I retained and still have. Until quite recently it was intact, but I unluckily broke it in two, the wood, which was always somewhat worm-eaten, being rather fragile.

On the authority of competent judges to whom I have submitted the arrow, the wood is certainly from a conifer, but in order to determine its nature more precisely, it would be necessary to make sections for micrographic examination, and sacrifice a portion of the arrow, a sacrifice to which I am unwilling to have recourse. All that can be stated, from a superficial examination, is that the yew is out of the question.

The arrow measures 0·695 m. in length. The wood is cut with care, and polished. The shaft is round and thinner at either end, the diameter increasing gradually to the middle, where the maximum circumference (measuring 0·033 m.) is reached; evidently, therefore, care was taken to satisfy certain ballistic conditions. The extremity to which the metal point is affixed ends abruptly. It shows some signs of wear and tear, but bears no trace of any attempt ever having been made to prepare it for receiving the point.

The other end, forming a little rounded knob, is deeply notched in order to fix the arrow upon the bow-cord. There are no signs of any place for the feather.

It is difficult to assign an age to this arrow from the mere appearance of the wood. In any case, I can scarcely believe that it can go back to the days of the Crusaders. It seems more natural,

on *a priori* grounds, to descend to the time when portable firearms had definitely replaced the bow and arrow. It may be surmised that under one of the last of the Mamluks, for example, an arsenal had been established in the fortress of David, with a store of arrows for the garrison of Jerusalem in case of need, and that this depôt having become useless and buried in oblivion in consequence of the change of armament, was fortuitously discovered towards the middle of the nineteenth century—whence our arrow.

16. *The Plasterer Sosibios of Gaza.*—A short while ago Father Jaussen and Father Vincent published a new Greek Christian inscription[1] from Gaza, which now belongs to Baron Ustinow's collection at Jaffa. It may be classed, in every respect, in the same family as the inscriptions which I, too, discovered at Gaza in 1870, and through which I have been able with absolute certainty to fix the *terminus a quo* of the era peculiar to this town (October 28th, B.C. 61).[2] They read the inscription thus :—

1. + Ἀνεπάε
2. ὁ μακάρ(ιος)
3. Σωσεβις
4. ὁ Γν†οκ . . . τῇ
5. περιτ(ίου) γι', ζμχ'
6. ἰνδ(ικτιῶνος) ε'

The name Σωσέβις is incontrovertibly a vulgar pronunciation and orthography of Σωσίβιος. The date corresponds to February 7th, 587 A.D.,[3] coinciding with year V of the indiction. The only difficulty which this little text presents lies in the reading of the group of letters in line 4 : —ΟΓΥ+ΟΚ*s*. The editors would see in this an ethnic or an adjective, qualifying the deceased, written in an abridged form, and bisected by the introduction of a cross. But ὁ γνοκ . . . still remains quite inexplicable.

Notwithstanding the fact that the editors cite an analogy for this (Σερ+γίου on one of the Medaba mosaics), I am not of opinion that the fourth sign here is a real cross, in spite of the superficial resemblance. To my mind it is a ψ, of the same size as the other

[1] "Revue Biblique," 1901, p. 580.

[2] Clermont-Ganneau, "Archæol. Researches in Palestine," ii, 398–429.

[3] Not February 13th, as the editors have it, since the 1st of Peritios coincides with January 26th (Julian calendar) in the Calendar of Gaza.

letters, to which a fantastically-minded engraver has merely given a *cruciform*[1] appearance. I propose, therefore, to read simply, ὁ γυψοκ(όπος), a name of a trade, formed on the same principle as ἀρτοκόπος, "baker," which is normally abridged into αρτοκο, or, like γυψοκ in this inscription, to αρτοκ.[2] The word γυψοκόπος, it is true, is not to be found in our classical dictionaries, but it is formed quite regularly from γύψος, "gypsum, plaster, lime," just as ἀρτοκόπος from ἄρτος, "bread," probably on the analogy of the working or manipulation of the flour on the one hand, and of the plaster or lime on the other. Both alike undergo the same operations—pulverisation, dilution, kneading or mixing, &c., not to speak of the cooking in the oven, which, although the last act in the case of the meal, and the first in the case of the plaster, completes the analogy. The Greek of the late epoch[3] knows, besides, a word γυψοκοπεῖον, an exact counterpart to ἀρτοκοπεῖον, "bakehouse," to indicate the place where they spread, pound, or knead the plaster or lime. This word completely guarantees the existence of the trade-name γυψοκόπος, which is accordingly to be added to our Greek lexicons. It is unnecessary for me to recall that the use of gypsum seems to have been very widespread in Syria, as is attested by the existence of the Rabbinical and Syriac words גפסום, גיפסים, גופסין, &c., and of the Arabic جبسين, the older form of which is جصّ (contracted from جبص), and even قصّ, words which designate plaster as distinct from lime (שִׂיד, סיד, شيد).

The whole text may now be translated as follows :—

"+ Is deceased the blessed Sosibios, the plasterer (or lime-burner?), the thirteenth day of the month of Peritios (in the year of the era of Gaza), 647 (= February 7th, 587 A.D.), indiction V."

[1] I have a vague recollection of having seen examples of this kind of whim before in the Græco-Syrian epigraphy : at present I can only recall certain examples of the cruciform χ from Cyprus (G. Colonna Ceccaldi, "Monum. Ant. de Chypre," p. 295, No. 25).

[2] *See* the examples cited in my "Archæol. Researches," ii, p. 143.

[3] Ducange, "Lex. de la basse-grécité," *s.v.* Γυψαρεῖον, on the authority of Harmenop. lib. 2, tit. 4, § 27.

OBITUARY OF DR. CONRAD SCHICK.

Dr. Schick was born on 27th January, 1822, at the little village of Bitz, and was educated at Korathal, and at the Pilgrim-Missions College of St. Chrischona in Switzerland. At the age of 24 he proceeded to Jerusalem as one of the four missionary brethren sent out by Mr. Spittler, of Basel, to initiate the romantic scheme described by Rev. J. E. Hanauer in *Q.S.*, 1900, p. 126. The missionaries, who were all mechanics, were to live together unmarried in a *Brüderhaus*; but, as Dr. Robinson has related, "they eventually left, and went into other employments where they might labour more effectively, and without the constraint of celibacy."

Dr. Schick became an agent of the London Jews Society, and made a marriage which added greatly to his happiness. For many years he was at the head of the School of Industry, in which, under the auspices of the Society, he taught carpentry and other useful trades to young Jews. He soon won the confidence and esteem of everyone; and his labours, spread over 50 years, were fully appreciated by the several heads of the Mission to the Jews at Jerusalem, under whom he worked.

At an early period of his life in Palestine, Dr. Schick seems to have taken an interest in the remains of ancient Jerusalem; and in 1864–5, whilst surveying the city, I found his local knowledge of great assistance. He frequently accompanied me in my examination of ancient cisterns and underground places, and became greatly interested in the exploration of the Holy City. In 1866, when I again visited Jerusalem, I asked him to watch all excavations made for building purposes, and to note, on a plan, the level of the rock wherever it was exposed, so that the form of the original surface of the ground might eventually be obtained. This was the origin of his long connection with the Fund, which only terminated, with his death, last December. Subscribers are well aware of the great value of his contributions to the *Quarterly Statement*, and of the light which they have thrown on many topographical and archæological questions connected with Jerusalem. In later years every moment he could spare was devoted to his favourite pursuit, and few days passed without some addition being

made to his many notes and plans. His ambition was to make a plan of the city which would show the interiors of all buildings, but this great work, upon which some progress had been made, he was not permitted to complete.

Dr. Schick was always ready to place his local knowledge at the disposal of the officers who from time to time conducted the exploratory work of the Fund; and Canon Tristram, Sir Charles Warren, Colonel Conder, Professor Hayter Lewis, and others have more than once expressed their appreciation of the services which he rendered to them and to the exploration of the Holy City. The late General Gordon, during his stay in Palestine in 1882–83, was a frequent visitor and correspondent; and used to illustrate his peculiar theories with regard to the holy places by notes and drawings which Dr. Schick preserved amongst his most cherished treasures.

Dr. Schick's communications to the *Quarterly Statement* and to the "Zeitschrift" of the German Society were numerous; and he also published a book, in German, on "The Tabernacle, the Temple, and the Temple Area," and a small guide to the Church of the Holy Sepulchre. He was, as a rule, accurate and painstaking, and his knowledge of the natural features of the ground on which the city stands was in some respects unique. But he had one fault, that grew with age, which lessened the value of some of his work, and often gave much trouble to the editor of the *Quarterly Statement*. In his later drawings and reports he rarely made any distinction between what he had seen and what he assumed to exist. This, more than once, led to errors which he was the first to acknowledge and regret when further research showed that he was wrong. A case in point was his assertion that the Chapel of St. Helena, in the Church of the Holy Sepulchre, formed part of the ditch of the second wall of Josephus. His great reputation for truth and honesty led to the acceptance of this view in Germany, and, to a lesser extent, in this country, as a final settlement of one of the most difficult questions connected with the ancient topography of Jerusalem. For this misleading statement, made in all good faith, and for its consequences, he often expressed his sincere regret.

It would be interesting to dwell upon the contrast between the Jerusalem of 1846, before the quickening effect of the Crimean War had been felt, and the rapidly growing city of the present day, but space forbids. In 1896, when Dr. Schick had completed his fiftieth year of residence, he received the warm congratulations

(*To face p.* 140.)

Baurath Dr. Conrad Schick.

of all his friends, complimentary letters from the British and German Societies for the exploration of Palestine, an address and an olive-wood table from members of the Mission to the Jews, and an easy chair from the German community in Jerusalem. "All this," he wrote, "is certainly more than I deserved. *My* doing was nothing, except to make faults. It is the *Lord* who has done, and enabled me to do, anything. His name be praised."

This letter shows one characteristic of Dr. Schick which cannot be allowed to pass unnoticed. He was, throughout his long career, a simple, earnest, Bible-loving Christian, whose great desire it was to lead a true, helpful Christian life. The influence which he exercised over the mixed population of Jerusalem may be gathered from the crowd of sorrowing friends—Christians, Moslems, and Jews—who followed him to his last resting place beside his old missionary comrades, Bishops Gobat and Barclay, the Revs. J. Nicolayson and S. Burtchaell, and Dr. Macgowan; and he now rests beneath the rock-scarp which marks the line of the old city wall.

Dr. Schick died literally in harness. On December 16th last, he wrote in his weekly letter to the Fund: "Thanks to God, my health has become, in the last two weeks, improving; so that I hope to fulfil the 80 years of which the Psalmist speaks (Psalm xc, 10) as the highest in human life. This will be on January 27th, 1902, and Mrs. Schick will be 76 years of age on March 6th next. So we both are old and worn-out people, and will be happy when we may go home." On December 23rd, two hours after he had been discussing business matters with his son-in-law, Mr. Schoenecke, Dr. Schick fell asleep. Twelve days later, on January 4th, Mrs. Schick, his helpmate for 48 years, peacefully and painlessly "crossed the bar," to join her husband in the home for which they had both longed.

Dr. Schick was honoured by crowned heads, learned societies, and universities. As Dr. D'Erf Wheeler, the Honorary Secretary of the Fund at Jerusalem, well says: "No one living knew Jerusalem as well as he did. His was a life's study. His models of the Temple of Solomon, the Herodian Temple, and the Haram area, are works of art and accuracy, and enjoy a world-wide reputation. He was honoured by several learned societies, and was sought after by scholars and others interested in the archæology of Palestine. The P. E. Fund are under a deep debt of gratitude to him. His loss locally is irreparable. His life was simplicity itself.

He was humble, kind, sympathising, and always ready to give any information he possessed. I have worked with him for nearly sixteen years, and feel his death as a personal loss. Mr. Macalister and myself attended his funeral, and I asked the Rev. J. Hanauer, who took part in the burial service, to mention how deeply sorry the Committee of the P. E. Fund would be to hear of his death, and to express their warm appreciation of all he had done for them, and the obligations they were under for all his valuable services."

C. W. W.

GOLGOTHA AND THE HOLY SEPULCHRE.

By Sir C. W. Wilson.

(*Continued from p.* 77.)

2. *That Golgotha was so called because it was the public place of execution, and abounded with the skulls of executed criminals.* These skulls, according to some authorities, lay about unburied, and, to others, were hidden from view in an adjoining rock-hewn tomb, into which the heads and bodies of those who were executed were cast.[1]

In the works of Greek authors there is no indication of any belief or tradition that Golgotha was a public place of execution. The idea appears to have originated with Jerome, who writes:—"Outside the city and without the gate there are places wherein the heads of condemned criminals are cut off, and which have obtained the name of Calvary—that is, of the beheaded. . . . From this it is evident that Calvary does not mean the sepulchre of the first man, but the place of the beheaded"[2] (in Matt. xxvii, 33; *Q.S.*, 1902, pp. 74, 11*b*). Jerome's view was adopted by the Venerable Bede (17) (A.D. 730) and other Latin writers. The

[1] According to Tal. Jer., *San.* vi, 9, 10 (written about A.D. 150), the Sanhedrin possessed two public burial-places—one for those decapitated or strangled, the other for those stoned or burned. When the flesh had disappeared, the bones were removed to the family tomb. (French translation by M. Schwab, Paris, 1888.)

[2] *See*, however, p. 74 (11), where Jerome, apparently, adopts the Adam legend. The quaint idea of Theodosius (*circa* 530), that Calvary was so called because men had their heads shaved there (*Illic decalvabantur homines*), need only be mentioned ("De Terra Sancta," ii).

fuller explanation of the word is given by Nicolaus de Lyra,—"because that place was full of the heads of the dead who had been decapitated there, since malefactors were punished at the spot";[1] and by Erasmus,—"because they cast there the heads of those who were executed."[2] In the same sense Jeremy Taylor (1613-67) writes, "the charnel house of the city, and the place of execution":[3] and Fuller, "because men's bones were scattered thereabouts"[4] (but *see* p. 146). Grotius and Vossius,[5] on the other hand, consider that the spot was not called Golgotha because skulls were left lying about, since that was contrary to Roman and Jewish custom, but from the fact that it was the public place of execution: this was also the opinion of Luther.

In more recent times the explanation has been adopted, either fully or partially, sometimes as an alternative, by several writers. Thus Plessing remarks,[6] "By this name (Golgotha) the Evangelists mean the place of execution at Jerusalem"; and Sepp[7] holds a similar view. Langlois considers[8] that Golgotha was "the place where criminals were crucified," or "the great Jewish cemetery of Jerusalem"; and Warren suggests[9] that "it may have been the place of public execution, where bodies were allowed to be devoured by birds and beasts, &c. (Gen. xl, 19; 2 Kings ix, 35; Herod. iii, 12) and thus have acquired this name."

The arguments urged by the advocates of this explanation are:—That there were in the time of Christ, as there are at present, certain fixed spots for the execution of criminals;[10] that these places were known by special names, *e.g.*, Sestertium at Rome, and κόραξ

[1] In Matt. xxvii, 33. Quoted by Bynaeus, "De morte Jesu Christi," vol. iii, p. 262 (Amst. 1698).

[2] *Ibid.*

[3] "Life of Christ," xv, § 30; *see* Heber's edition of the Works of J.T., iii, 260, *cf.* p. 374, "a hill of death and dead bones, polluted and impure."

[4] "Pisgah-Sight of Palestine," p. 344 (Lond. 1650).

[5] *See* Bynaeus, *l.c.*

[6] "Ueber Golgatha und Christi Grab" (Halle, 1789).

[7] "Golgatha selbst heisst das Hochgericht," "Jerusalem und das Heilige Land," i, 428 (1873). *See also* Mislin, "Les Saints-Lieux," ii, 25 (Paris, 1851).

[8] "Un chapitre inédit de la question des Lieux-Saints" (Paris, 1861).

[9] As an alternative view, Hastings' Dictionary of the Bible, art. "Golgotha."

[10] For instance, the Mamertines had such a place on the Pompeian Way outside their city (Messina), and the Romans one for the crucifixion of slaves and malefactors of the lowest class, about 2½ Roman miles from the Esquiline Gate (Tacitus, "Ann," xv, 60).

(*corvus*) in Thessaly;[1] that there must have been such a place at Jerusalem; and that its name was Golgotha.

The objections to the explanation are:—That as the singular, not the plural, is always used in the Bible narrative—"the place of a skull" (*κρανίου τόπος*), not "the place of skulls" (*κρανίων τόπος*), or simply, as in Luke, "the skull" (*τὸ κρανίον*)—the name could not have referred to a collection of skulls; that decapitation, though it was a Roman form of punishment, and may have prevailed amongst the Jews under Roman rule, was not a common Jewish custom, and that the name, which apparently existed before the Roman occupation of Palestine, could not have been derived from the skulls of decapitated persons; that since, in accordance with Jewish law (Deut. xxi, 23), the Jews buried those who had been put to death on the evening of the day of their execution, and crucified Jewish criminals were allowed burial under the Romans[2] (Matt. xxvii, 58; John xix, 38), the unburied dead or their skulls could not have been lying about; that a fixed public place of execution, according to Western ideas, is unknown in the East, and that if such a place existed at Jerusalem, and was known as Golgotha, the name would probably have been attached to places of a similar nature in other parts of Palestine—there is, however, no known instance of such use of the name;[3] that, if the words in John xix, 41, Matt. xxvii, 60,[4] are to be taken literally, the explanation involves the almost inconceivable theory that the garden of Joseph of Arimathea was the public place of execution or immediately adjoined it, and that Joseph deliberately made a new tomb for himself at, or very near, a spot which every Jew must have regarded with abhorrence as unclean;[5] that, philologically, the view that Golgotha means place of execution is inadmissible.

[1] Sestertium, from *semis tertius*, that is, two and a half; *κόραξ*, *corvus*, raven or crow, a term probably borrowed from the unburied bodies on which the birds fed.

[2] This was apparently omitted in exceptional circumstances (Josephus, "B. J.," iv, 5, § 2).

[3] The same objection applies with equal, if not greater, force to the suggestions of Langlois (*l.c.*) and Bovet ("Voyage en Terre Sainte," p. 196, 3rd ed., Paris, 1862), that the name was applied to, or connected with, a cemetery of rock-hewn tombs.

[4] "Now in the place (*ἐν τῷ τόπῳ*) where he was crucified was a garden; and in the garden a new tomb"; and Matthew says that Joseph laid the body "in his own new tomb."

[5] It is, on the other hand, quite conceivable that Joseph may have owned

The question which the explanation incidentally raises with regard to the existence or non-existence of a public place of execution at Jerusalem is discussed in Appendix II. It will be sufficient to say here that in late Jewish times, Maccabæan, and post-Maccabæan, the Place of Stoning, or Beth ha-Sekelah, may possibly have been a fixed spot; and that, if Stephen suffered martyrdom at the Place of Stoning, that spot is placed by a tradition, at least as old as the fifth century, outside the Damascus Gate. There is, however, no evidence of any kind to show that the Beth ha-Sekelah was called Golgotha,[1] or that it was the place at which the Romans executed criminals either by crucifixion or by decapitation. A consideration of Roman custom leads to the belief that crucifixion at a Jewish place of execution, if there were one, was a possible but not a probable occurrence. Authorities who accept the view that Golgotha was a public place of execution are not always agreed with regard to its identity with the Jewish "Place of Stoning." For instance, Hildebrand, regarding the two places as identical, locates the scene of Stephen's martyrdom at "the place of a skull."[2] Conder believes that Christ was crucified at the Beth ha-Sekelah.[3] Warren, on the other hand, writes:[4] "It (Golgotha) was probably distinct from the place of stoning, because at this time the Jewish Sanhedrin, though it could condemn, could not put to death without the intervention of the Roman Governor."

3. *Because Golgotha, in some fashion or other, resembled a human skull.* This is the explanation which finds most favour at the present day; but there are differences of opinion with regard to the nature of the resemblance. A large majority of writers consider Golgotha to have been either a rounded knoll, or underfeature, of bare rock, or a hillock with skull-shaped top; and associate with it the idea of height, prominence, and wide visibility. Thus Jeremy Taylor writes:[5] "Calvary, a place difficult in the ascent, eminent and apt for the publication of shame, a hill of

the ground in which the supposed tomb of Adam was situated, and have selected a place in it for his own sepulchre.

[1] There is no apparent connection between "the place of a skull" or "the skull," and the infliction of the death penalty by stoning.

[2] Qui extra urbem ductus *ad calvariæ locum*." Joachimus Hildebrandus, "De Precibus veterum Christianorum," p. 17, § 10, (1667).

[3] "Handbook to the Bible," 4th ed., 1887, pp. 355, 356.

[4] Hastings' D.B., art. "Golgotha."

[5] *l.c.*, iii, p. 374, § 3.

death"; Fuller, that it was so called "Either from the fashion thereof, because that hill was rounded up in the form of a man's head,"[1] or (*see* p. 143); and Warren, "From the appearance of the place itself, from its round and skull-like contour, the Hebrew word Golgotha being applied to the skull from its rounded form"[2] (but *see* p. 143). Fisher Howe considers[3] that Golgotha was the crown of an "isolated skull-shaped hill," with "a skull-like front or face," and "eminently conspicuous"[4]; Bovet says that it was "A small knoll, or summit, like those seen in large numbers to the north of Jerusalem. . . . . It was no doubt a bare rock, such as those knolls usually are."[5] Renan writes that Golgotha "Corresponds, it seems, to our word *chaumont*, and probably designated a knoll of bare rock (*tertre dénudé*) having the form of a bald head"; [6] Thenius, that "It may have had its name from its likeness to a skull"; [7] and he cites as analogies the tumuli in Thessaly called *Cynocephalæ* (Liv. xxxiii, 7), the hill called Εὐρύηλος, *latus clarus*, near Syracuse (Thucyd., vii, 2; Liv. xxv, 25), and the Ochsenkopf, a peak of the Fichtelgebirge. A similar view is taken by Meyer, who compares the German use of the words *kopf*, *scheitel*, and *stirn*.[8] Guthe maintains that the name was derived from a knoll, or, better still, an under-feature with a projecting cliff of rounded form, which reminded those who looked at it of a skull. His view is that the natural feature was the origin of the place-name; and that Jewish fancy declared the grotesque skull to be that of Adam, and placed the tomb of the first man beneath it.[9] General Gordon considered the resemblance to a skull to consist in the form of a contour of the ground, as represented on the Ordnance Survey Plan of Jerusalem.[10]

[1] *l.c.*, p. 344.

[2] *l.c.*, Art. "Golgotha."

[3] "The True Site of Calvary" (New York, 1871).

[4] *See* the Speaker's Com. on the Bible, "Matt.,"—"A mound sloping on all sides, sufficiently high to be seen from some distance."

[5] *l.c.*, p. 196.

[6] "Vie de Jésus," 16th ed., p. 429.

[7] "Golgotha," &c., in "Zeitschrift für die historische Theologie," vol. xii, Part 4, pp. 1–34 (1842).

[8] "Com. on Matt.," 486 *f.* *See* also Brandt, "Die Evangelische Geschichte," p. 168; and Arts. Golgatha in Schenkel, "Bibel Lexikon," and Riehm, "Handwörterbuch des bib. Altertums."

[9] Art. "Grab, das heilige," in Hauck, "Realencyklopädie für prot. Theol.," 3rd ed. (1899).

[10] On the $\frac{1}{2500}$ scale plan; *see* *Q.S.*, 1885, p. 78; 1901, p. 403.

The explanation is considered unsatisfactory by Alford,[1] Mommert,[2] and others.

There is no indication in the Bible that Golgotha was skull-like in form, or that Christ was crucified on a knoll, a hillock, or a hill. The narrative does indeed imply that the crucifixion was visible to many spectators; but this would have been the case if the crosses had been erected in one of the valleys that enclose or intersect the Jerusalem plateau, and the lookers-on had stood on its slopes. The features of the ground near the city are, in fact, such that elevation is not necessary for visibility.[3]

No early Greek or Latin writer suggests resemblance to a skull as an explanation of the place-name; and, with the exception of Cyril of Jerusalem, who, lecturing in the immediate vicinity of the Golgotha of Constantine's Church, alludes to it as "this holy place which is raised above all others," and "this holy Golgotha rising on high, and showing itself to this day;"[4] no Greek writer connects Golgotha with the idea of height or altitude. Still, both ideas must have been current in the fourth century, for Epiphanius mentions them, simply to condemn them: "There is nothing to be seen in the place resembling this name; for it is not situated upon a height that it should be called [the place] of a skull, answering to the place of the head in the human body; neither has it the shape of a lofty watch-tower, for it does not even rise above the places round about it" (*Q.S.*, 1902, p. 72 (3)).

The skull-like appearance and elevation of Golgotha appear to have been fancies introduced from the West. No Greek writers use the expression "mount." Without exception they call[5] the spot "Golgotha," "the place Golgotha," "the holy place Golgotha," "the skull," "the place of a skull," or "of the skull," &c. The first, so far as is known, to use any expression connecting Golgotha with altitude is the Bordeaux Pilgrim (*circa* 333 A.D.), who visited Jerusalem whilst the churches of Constantine were being built, and calls the spot

[1] "Greek Testament," on Matt. xxvii, 33.

[2] "Golgotha und das heilige Grab in Jerusalem" (Leipzig, 1900).

[3] *See* the extract from Ambrose (*Q.S.*, 1902, p. 74, 10*a*), "The place of the cross was either in the midst, that it might be seen of all," &c.

[4] "Cat.," x, 19; xiii, 39. The lectures were delivered in the Basilica of Constantine, called by St. Silvia the "Great Church in Golgotha," to distinguish it from the Anastasis, or Church of the Resurrection.

[5] Γολγοθά; ὁ τοῦ Γολγοθᾶ τόπος; ὁ τόπος τοῦ ἁγίου Γολγοθᾶ; κρανίον; κρανίου τόπος: ὁ τόπος τοῦ κρανίου; τοῦ κρανίου χῶρος; &c.

"little Mount Golgotha"[1] (*Monticulus Golgotha*). At first the expression does not seem to have found favour with Latin writers, for Jerome uses the terms "the skull" (*Calvaria*), "the place of a skull" (*locus Calvariæ*), and "the rock of the cross"[2] (*crucis rupes*); Rufinus (345–410) mentions "the rock of Golgotha" (*Golgothana rupes*);[3] *see also* Eucherius[4] (*circa* 440). The "mount" is unknown to Tertullian, Ambrose, and Augustine; but it appears in the sixth century in the "mountain of the skull" (*Mons Calvariæ*, or "Mount Calvary") of the Breviarius[5] (*circa* 530); and in Theodosius.[6] Bede and Willibald, in the eighth century, revert to the earlier form, but in the ninth century "Mount Calvary" reappears in the pilgrimage of Bernard (870 A.D.).[7] In later times the expression is very frequently used by Latin authors, from whose writings it has passed into the languages of the West. It would almost appear that the Western type of mind required a material elevation of Golgotha to complete the spiritual idea of looking up to the Redeemer upon the Cross, and to ensure wide visibility. At any rate the idea of height in connection with the Crucifixion has been so persistent in the Western mind that in Latin translations from the Greek, κρανίου τόπος, "the place of a skull" is often rendered *Mons Calvariæ*, Mount Calvary[8]; and in the Calvaries of Roman Catholic countries the cross stands on an eminence reached by a *Via Dolorosa* marked by the stations of the Cross. So, too, in our own country, the words of a popular hymn—

"There is a green hill far away, outside a city wall,"

teach every child to believe that Christ suffered on the top of a hill.

[1] "Itin.," *see* "P.P.T.S.," vol. i, "The little hill of Golgotha where the Lord was crucified."

[2] "Ep. ad Paulinum" (*circa* 395 A.D.), Migne, "Pat. Lat.," xxii, col. 581. The expression "in Montem Calvariæ" occurs in a collection of writings wrongly (?) attributed to Jerome ("In Marc."), Migne, xxx, col. 565.

[3] "Hist. Eccl.," ix, 6. Juvencus uses the expression "the field named Golgotha" ("Ev. Hist.," lib. iv, Migne, "Pat. Lat.," xix, col. 334).

[4] "Epit.," § iv; "P.P.T.S.," vol. ii.

[5] "P.P.T.S.," vol. ii.

[6] "De situ Terræ Sanctæ," *ib.*

[7] "Itin.," *ib.* vol. iii.

[8] Also *locum sacri Montis Golgotha* for ὁ τόπος τοῦ ἁγίου Γολγοθᾶ. Even in the last English edition of "Sozomen's Ecclesiastical History," κρανίου is translated Mount Calvary (Library of Nicene and Post-Nicene Fathers, ed. Wace and Schaff, vol. ii).

Mosaic in the apse of the Basilica of Sa. Pudenziana, Rome. (*Photo. by D. And*

(*To face p.* 148.)

The origin of the term "Mount" Calvary may perhaps be sought in the isolation of the rock of the Cross, which, as we shall see later on, formed part of the design of Constantine's architect. In the very interesting mosaic in the tribune of the Basilica of Sa. Pudenziana at Rome (*see* plate), which is supposed to represent Constantine's churches at Jerusalem, and on the Mount of Olives, and to date from the fourth century,[1] the cross is represented as standing on a little hill that corresponds exactly to the *Monticulus Golgotha* of the Bordeaux Pilgrim. If this form was originally given to the rock,[2] the idea that its rounded top was skull-like would appeal to the materialistic tendency of the Western mind.

On several tombstones of the sixth century, found by M. Clermont-Ganneau in Palestine, the cross stands upon a three-lobed or trefoil base, which, in ancient art, *e.g.*, Assyrian, is the symbol for a hill or mountain. M. Clermont-Ganneau, from whose "Archæological Researches" the illustration (p. 150)[3] is taken, regards the symbol as evidence that popular belief in very early times began to regard Golgotha as an eminence—"Mount Calvary." The base seems, however, to be a conventional representation of "the rock of the cross," and its use possibly dates from the fifth century, when the attitude of the Church in Jerusalem towards "holy places," and symbolical representations in art was, to say the least, sympathetic. The symbol is so suggestive of a hill, and the upper lobe is so

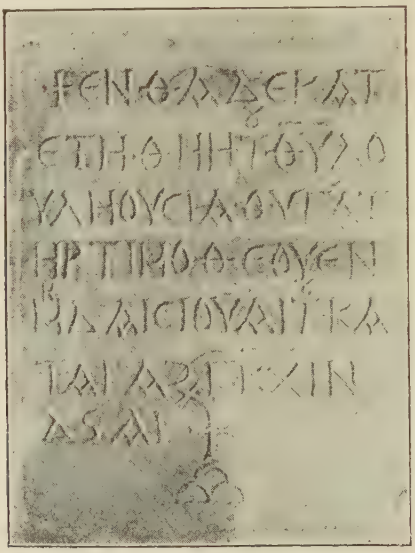
[1] The church is supposed to occupy the site of the house of Pudens, in which St. Paul lodged. The two daughters of Pudens were converted by St. Paul, and from one of them the church derives its name. The mosaic represents Christ enthroned, and blessing with the right hand. Beside Him are SS. Peter and Paul, in the act of being crowned by the two daughters of Pudens, and other figures. In the background are the cross on its rock, emblems of the Evangelists, and buildings which will be more fully noticed later. The church is said to have been restored by Pope Siricius (384–398 A.D.), and the mosaics, though often repaired, to date from the fourth century, or to have been copied from others of that date (Murray, "Handbook to Rome").

[2] Many authorities believe that the Mount Calvary of the present day is an artificial construction, and some support is given to this view by the words of Gregory Nazianzen (as quoted by Quaresmius, ii, 446, *a*; *see* 18). My own examination of the spot has led me to believe that the "Mount" is natural rock, somewhat altered from its original form by the vicissitudes which it has undergone, and the various reconstructions of the church. The mosaic appears, at first sight, to confirm the idea of artificial construction; but the horizontal lines are probably intended to represent the thin beds of limestone.

[3] "Archæological Researches," i, 337; ii, 407, 409, 410, 416, and the accompanying woodcuts.

skull-like in form, that the whole could not fail to strengthen the Western theory that Golgotha was a hill with a skull-shaped summit.

It has been urged, in support of the view that Golgotha derived its name from its skull-like appearance, that place-names of a similar nature occur in the Bible and Josephus, *e.g.*, the shoulder (*shĕchém*, Gen. xlviii, 22, *cf.* Josh. xv, 8, xviii, 16), the navel, apparently for a pass, in Judges ix, 37, and Gamala, from the hump of a camel, in Josephus. Place-names taken from fancied resemblance to parts of



Tombstone from Gaza.

the human body are known in all languages, but there is no evidence that any physical feature was called "the skull"[1] or "the place of a skull," from its likeness to a human skull, in Hebrew or in any of the cognate languages. It may be added that the thin beds of hard siliceous chalk, or limestone, which form the upper surface of the

[1] El-Jumeijmeh, "the little skulls," a small village on a hill-top in Northern Palestine, has been cited ("Encyc. Bib. Art. Golgotha") as an instance of a place-name analogous to Golgotha. The origin of the name is not known, but there is no resemblance between the hill and little skulls. Probably, as in the case of Ramath-lehi (Judges xv, 17), "the hill of the jaw-bone," the place-name is derived from some incident or legend connected with the spot.

Jerusalem plateau, do not weather into bare rocky knolls of skull-like form and appearance, such as are sometimes to be seen in places where the softer rock comes to the surface. On the small plateau the knolls only assume a rounded form when covered with soil or rubbish. If any resemblance to a skull existed at Golgotha it must have been as suggested by Guthe (*see* p. 146) to a profile.

The conclusion, which seems to follow from the above discussion, is that Golgotha derived its name from a local legend which connected it with a skull, possibly that of Adam, as all the early Christian Fathers who mention the subject assert. And that the theories which identify "the place of a skull" with a public place of execution, or with a spot, whether on an eminence or not, which resembled a skull, are of later growth and probably of Western origin. One interesting but very obscure question, the possible connection between Golgotha and the name, *Ælia Capitolina*, of Hadrian's new city, will be noticed in the discussion on the authenticity of the traditional site of the Crucifixion.

APPENDIX I.

(17) Ven. Bede, *in Matt.* xxvii.—*And when they were come unto a place called Golgotha.*—Now Golgotha is a Syrian word, and is, being interpreted, a place of a skull (*Calvariæ*). This place is in Elia (Jerusalem), and was at that time without the city, on the northern side of Mount Sion, and was called the place of Calvary, not because of the baldness of the first man, whom some in error do vainly suppose to have been buried there, but because of the beheading of criminals and men condemned to die. For this reason the Lord was crucified there, in order that the standard of his martyrdom might be set up on the spot which heretofore had been the place of execution of the condemned (Migne, "Pat. Lat.," xcii, col. 123).

(18) According to Quaresmius (ii, 416*a*, ch. 38), "Gregory Nazianzen mentions this place, and has described its nature, for towards the beginning of his tragedy of 'Christus Patiens,' he says that it is rocky, and stands out above the paved floor :—

"'When the impious crowd, dragging with it my King, had left the city of the Solymi, and had come to a lofty spot strewn with many rocks. . . . .'

"And further on :—

"'So when, standing on a spot raised on a mound of rocks, they had nailed the Lord of all upon the tall cross,' &c."[1]

[1] I have not been able to trace these extracts in Migne.

APPENDIX II.

On the Existence or otherwise of a Public Place of Execution at Jerusalem.

Jewish Capital Punishment.—According to the Talmud, four methods of capital punishment were sanctioned by Jewish law—stoning, burning, decapitation, and strangling (San. vii, 1). Of these it is only necessary to take the first and third into consideration.

The penalty of *decapitation*, or death by the sword, is not sanctioned directly by the Divine command. Its indirect sanction is deduced from a comparison of the words in Ex. xxi, 20, "he shall surely be punished," with those in Lev. xxvi, 25, "and I will bring a sword upon you that shall execute the vengeance of the covenant" (San. vii, 1). The instances of execution by sword or spear recorded in the Bible, are due either to Divine direction (Ex. xxxii, 27); to individual action, prompted by Divine impulse (Num. xxv, 7, 8; 1 Sam. xv, 33; 1 Kings, xix, 1); or to an order from the King or persons in authority (1 Sam. xxii, 18, 19; 2 Sam. i, 15, iv. 2; 1 Kings ii, 25, 34; 2 Kings x, 7, xxi, 4; Jer. xxvi, 23, Judg. ix, 5; 2 Kings xi, 16–20; 2 Ch. xxiii, 15; Matt. xiv. 10). None of these executions appear to have been carried out at a place specially selected.

Stoning was the primitive and popular form of execution, inflicted on criminals guilty of heinous crimes. Originally everyone took part in the execution as a patriotic act, which removed a criminal of the worst description from the community. Moses, by Divine command, introduced reforms which restrained the passions of the multitude by insisting that those who had testified against the condemned person should commence the stoning (Ex. xvii, 4, xix, 13; Lev. xxiv, 14–16; Deut. xvii, 2–7, xxi, 21, xxii, 21, 22; Josh. vii, 25; Luke xx, 6; Acts vii, 58, xiv, 5; *cf.* John viii, 7). The Talmudists completely altered the method of execution; they made it judicial, and threw the condemned person down from a height. He was only stoned if he did not succumb to the fall (San. vi, 5). The criminal was executed outside the camp or city (Lev. xxiv, 14; Josh. vii, 24–26; 1 Kings xxi, 13; Acts vii, 58), possibly near one of the gates (Deut. xvii, 5, xxii, 24); but, apparently, sometimes within the camp or city limits (Deut. xxii, 21; *cf.* John x, 31, where the Jews are said to have taken up stones to stone Jesus in Solomon's Porch). After the stoning the body was hung on a sort of gibbet until sunset, and then buried outside the city, heaps of stones being raised over it (Deut. xxi, 23; Josh. vii, 26, x, 26, 27).

The method of execution in later times is described in the Talmud. The sentence was carried out at some distance from the place where the Court sat (San. vi, 1). According to Maimonides,[1] if the trial took place outside the city, the place of execution was three Sabbath days' journey

[1] San. xii, 3, p. 96. Quoted by Hanauer in *Q.S.*, 1881, pp. 318, 319.

from it. The place of stoning, or Beth ha-Sekelah, was twice the height of a man. One of the witnesses threw the condemned person down from this elevation in such manner that he fell upon his back. If the fall did not kill him, another witness cast the first stone; and if this did not suffice the bystanders, or all Israel, stoned him till he died (San. vi, 5). In carrying out the sentence a natural feature, such as a low cliff, or rock-scarp, was not necessary, and is not mentioned, I believe, in any of the treatises of the Talmud. Possibly a stage or scaffold of wood,[1] which could be set up at any convenient spot, was used—the spot becoming for the time the Beth ha-Sekelah. The bodies of those stoned for blasphemy or idolatry were hung up after death, but were taken down when night commenced and buried without honour in a common burial-place which belonged to the Sanhedrin (San. vi, 6, 7, 9; Jos., "Ant." iv, 8, § 6; *cf.* iv, 8, § 24, where the body of a rebellious child is to be exposed, not hung up).

There is nothing in the Bible or Josephus to suggest that condemned persons were stoned at a spot set apart for the purpose. Places of public execution, according to Western ideas, are not, and never have been, customary in the East.[2] The usual practice has been, and is, to execute important criminals at places where the greatest impression would be made on the people; and in the case of obscure criminals to allow the soldiers, or others in charge, to carry out the sentence where they pleased. It is, however, a possible inference from the fact that the Sanhedrin owned a burial-place for executed criminals (San. vi, 9), that the Beth ha-Sekelah was not far from the sepulchre. Assuming that this was the case, there is nothing in the Talmud to show the direction of the place of stoning, with regard to the city. A tradition, at least as old as the fifth century A.D., places the scene of Stephen's martyrdom on the north side[3] of the city, outside the Damascus Gate, and one local tradition now identifies the Beth ha-Sekelah with *el-Edhemîyeh* or *el-Heidemîyeh*,[4]

[1] Hanauer (*l.c.*) gives the height of the scaffold as 10 to 12 feet, on the authority of Rabbinowicz; but I have not been able to find the statement in the original French, or to see a copy of the German translation referred to.

[2] Fallmerayer appears to go too far when he says that in Jerusalem and the whole East there never was, and is not now, a public place of execution according to Western ideas ("Denkschrift über Golgotha und das heilige Grab," p. 671).

[3] In the original Greek of the Latin version of the story of the discovery of the relics of St. Stephen, it is said that the martyr's body lay for a night and a day "on the *exopyla* of the town on the side by which we go to the Kedar." M. Clermont-Ganneau considers the exopyla to be the heaps of refuse outside the city, and "the Kedar" to be some unknown place near Jerusalem ("Recueil d'Arch. Orient," 1900, p. 66). A different view is taken by P. Lagrange in "Revue Biblique," 1900, p. 142.

[4] Abbot Daniel (1106–7 A.D.) describes (ix) this place as "a flat rocky mountain which split up at the time of Christ's crucifixion; the place is called Gehenna" Whether the name was originally *el-Heidemîyeh*, "the

now known as Jeremiah's Grotto. Another local tradition[1] places the spot to the west of the city, near the Convent of the Cross. How far these traditions are trustworthy it is impossible to say, but probably not much reliance can be placed on existing local traditions.[2]

Roman Capital Punishment.—The question whether the Romans had a public place of execution at Jerusalem, and, if so, whether it was identical with the Beth ha-Sekelah, is equally obscure. With regard to *decapitation*, Jerome writes (in Matt. xxvii, 33): "Outside the city, and without the gate, there are places wherein the heads of condemned criminals are cut off, and which have obtained the name of Calvary—that is, of the beheaded" (*Q.S.*, 1902, p. 75, 11*b*); as if there were, in his day, several places of execution, each of which was called Calvary. This is no evidence against the view that, in the first century A.D., there was a fixed place of execution, but it is suggestive of Roman custom.

Crucifixion, in one form or another, was widely spread in the ancient world. From the Phœnicians it seems to have passed to the Greeks and Romans, and the latter introduced it into the Provinces for the punishment, at first, of slaves, highwaymen, rebels, &c. The Jews hung up, or "crucified," the bodies of criminals after death; but crucifixion does not appear to have been a Jewish form of punishment at any period.[3] The Romans[4] crucified criminals outside the city or camp. They usually selected for such executions the side of a frequented road or pathway, but they often carried them out in a conspicuous place like the Campus Martius, at a spot set apart for the purpose like the Sestertium (p. 143), or at the place where the crime was committed, and occasionally on a hill.[5] At Jerusalem, Florus had Jews of equestrian rank crucified in his

rent," or *el-Edhemîyeh*, as it is given by Mejr ed-din, is uncertain. The valley to the east is connected by Moslems with death and the last judgment (*see* "The Abbot Daniel," App. I, p. 90, "P.P.T.S.").

[1] Hanauer (*l.c.*).

[2] The tradition relating to Jeremiah's Grotto is current amongst the Spanish Jews, whose ancestors settled in the city in the fifteenth century.

[3] The crucifixion of 800 Jews, within the walls of Jerusalem, by Alexander Jannæus (Jos., "B. J.," i, 4, § 6) seems to have been an exceptional act of barbarity. It has been suggested (Smith's "Dicty. of the Bible," Art. "Crucifixion") that in Num. xxv, 4, Deut. xxi, 22, Josh. viii, 29, and other passages in the Old Testament, "hanging" implies crucifixion; but this is very doubtful. It probably indicates the hanging, or exposure of the body after death, as a mark of ignominy. Such hanging was apparently not uncommon amongst the Egyptians (Gen. xl, 19), the Philistines (2 Sam. xxi, 12), and the Jews (2 Sam. iv, 12; xxi, 6, 9). Minute details with regard to the Jewish mode of hanging after death in later times are given in the Talmud (San.).

[4] The authorities for the Roman custom with regard to crucifixion are given in Articles "Cross," "Crucifixion," and "Punishments," in Smith's "Dicty. of the Bible," "Dicty. of Greek and Roman Antiqs.," "Dicty. of Christian Antiqs."; Hastings' "Dicty. of the Bible," "The Encyc. Biblica."

[5] The practice seems to have been similar to that which prevailed in this

presence whilst seated on the *bema* in front of Herod's palace (Jos., "B. J." ii, 14, § 9); and Varus seems to have crucified Jews at any convenient place ("Ant." xvii, 10, § 10). In ordinary cases the body was left upon the cross until it had perished through the action of rain or sun, or had been devoured by birds and beasts. Sepulture was usually forbidden, but in consequence of the Jewish law (Deut. xxi, 22, 23) an exception was made in favour of the Jews (Matt. xxvii, 58; John xix, 38; *cf.* Jos., "B. J." iv, 5, § 2).

The conclusion seems to be that, with our present knowledge, it is impossible to say whether there was, or was not, a public place of execution at Jerusalem either before or after the Roman occupation. There is no evidence that the Romans, during their occupation of the city, executed criminals at a public place of execution. It would have been contrary to their usual practice to do so. There is no evidence of any value that the Jewish place of stoning was a fixed spot: there is only a bare possibility that it may have been so in Maccabæan and post-Maccabæan times. The view that there was a Jewish public place of execution at Jerusalem in the first century A.D., and that during the Roman occupation it was the place at which criminals were crucified or decapitated is not supported by any evidence, direct or indirect.

OBSERVATIONS OF THE DEAD SEA LEVELS.

By Dr. E. W. Gurney Masterman.

For a year and a half observations have been made under the auspices of the Palestine Exploration Fund to ascertain the seasonal and annual variations in the level of the Dead Sea. In *Quarterly Statement*, 1901, p. 4, Mr. Macalister reports our visits to 'Ain el-Feshkhah and the selection of a suitable place for making these observations. Since that time I have made the periodical measurements of the changes of level, except once, when Mr. Hornstein, who has on several other occasions given me the benefit of his assistance, undertook the duty. Exact uniformity in the method of taking the measurements is absolutely necessary, as otherwise, at the site chosen there is room for a considerable range of error. On

country with regard to gibbeting, which like crucifixion was meant to terrify. In populous districts, and in large towns, the gallows were erected near a road, or in a public place, whilst in the more sparsely-peopled country districts they were set up on hills so as to be more visible.

every occasion after the first I used a small weight to keep the tape vertical.

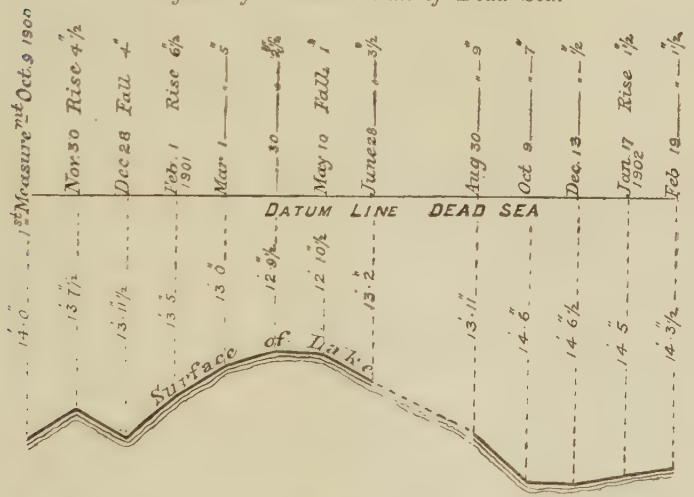
The rock on which the P.E.F. mark was cut is a huge mass of conglomerate, fallen from the mountain above, which breaks the long line of reeds skirting the shore between 'Ain el-Feshkhah and Râs el-Feshkhah. It is nearly a mile south of the *'Ain*, and is approached by a faint track parallel to the shore, the last half of the way being a scramble from rock to rock. I always have to leave my horse at the *'Ain*. On hot days (and such are the rule,—all westerly breezes being shut off by the mountains) the walk to and from the observation point is more exhausting than all the rest of the journey. It is possible that nearer the *Râs* a surface of rock really perpendicular might be found, but this advantage would, in my opinion, be slight compensation for the extra length of scramble in the sweltering heat. Our rock is not quite perpendicular nor quite smooth; hence care is required on each occasion to lay the measure in exactly the same way. The observations are made with an ordinary tape measure; the end, weighted with a small stone, is dropped to the level of the water, and the other end laid against the north end of the horizontal line cut on the rock. To prevent mistakes I have always made two or three independent measurements, withdrawing and readjusting the tape each time.

The sea on most of my visits was smooth, at any rate in the bay made by the *Râs*; the only occasions when there were wavelets and a fairly strong wind (south-east) were on November 30th, 1900, October 9th, 1901, and January 17th, 1902. On the last date there was almost a storm: the wind was first south-east, then veered to south-west. Possibly this wind may have raised the general level of the water a little—indeed, comparing the first of these measurements with that made December 28th, 1900, I feel sure it must have done so.

Coming now to the actual measurements, it will be noticed that the difference between the highest and lowest during the year was small—much less than was supposed by those who have written on the subject. The P.E.F. mark was originally (October 9th, 1900) 14 feet above the lake level; on March 30th—almost at the end of the rainy season—the water had risen 1 foot $2\frac{1}{2}$ inches; it remained near that level till May, when it again began to fall: on December 13th, 1901, I found that there had been a total fall of 2 feet 1 inch. Admitting that the visits may not have been timed

to catch the extremes, I think we are within the limit in saying that the difference in level between the lowest in 1900 and the highest in 1901 was under 1 foot 6 inches, and that the difference between the latter and the lowest in 1901 was within 2 feet 6 inches. The rainy season 1900–1901 was unusually dry (only 17 inches of rain were registered in Jerusalem), and probably the rise was below the average; the effect of this is also seen in the fact that on a certain day in 1901 the level was 6 inches lower than the same day in 1900, and later sank still lower.

Diagram of Rise and Fall of Dead Sea.

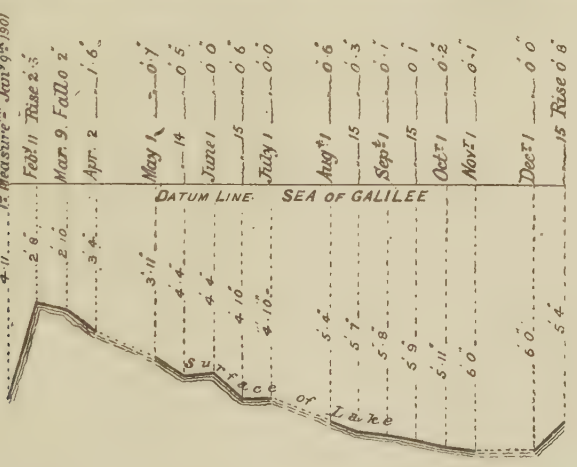


Should, as we hope, the rainfall this season (1901–1902) return to what it has been for some years past, interesting results will be obtained. An annual difference of even 6 inches in a uniform direction, *i.e.*, of higher or lower level, would necessarily make a great change in the general lake level during a period of years. This is well illustrated by the fact that by January 17th, 1902, the level still remained, in spite of a heavy rainfall (11 inches) over a foot lower than it was February 1st, 1901. Probably the level is highest about the middle of April—lowest in ordinary years in November.

I send with this a table, showing the dates of visits, the length of intervals between visits, the amount of the rainfall at Jerusalem, and a few general remarks.

No. of Visit.	Date of Visit.	Hour.	Length of interval in days.	Rainfall during interval at Jerusalem.	Rise.	Fall.	Remarks.
	1900.			inches.	inches.	inches.	
1	Oct. 9 ..	11 a.m.	—	—	—	—	Mark made (see *Q.S.*, 1901, p. 4); no weight used.
2	Nov. 30..	11 ,,	52	0·490	4·5	—	Strong S.E. wind; small waves; weight used, and on all subsequent occasions.
3	Dec. 28..	7 ,,	29	5·180	—	4·0	Observation made by Mr. Hornstein.
	1901.						
4	Feb. 1 ..	11 ,,	35	7·555	6·5	—	Strong westerly breeze; reeds at 'Ain Feshkhah in flower.
5	March 1	10 ,,	28	0·150	5·0	—	Fresh green leaves and flowers in plain; off the beaten track much of the plain very soft.
6	March 30	11 ,,	29	0·740	2·5	—	Intense heat; swarms of locusts; storks.
7	May 10 ..	9 ,,	40	0·735	—	1·0	Intense heat; Sultan's cattle from Jericho feeding at 'Ain Feshkhah.
8	June 28..	9 ,,	49	0·995	—	3·5	Strong westerly breeze; intense heat; signs of recent thunderstorms at 'Ain Feshkhah.
9	Aug. 30..	5.30 ,,	63	—	—	9·0	Intense heat.
10	Oct. 9 ..	noon	40	—	—	7·0	South-east wind; small waves; cattle at 'Ain Feshkhah.
11	Dec. 13 ..	,,	65	—	—	0·5	
	1902.						
12	Jan. 17 ..	1.30 p.m	35	3·700	1·5	—	Strong south-east wind veering to south-west; rain and high waves on the sea; the reading was probably too high.
13	Feb. 19 ..	10.15 a.m.	33	Not reported	1·5	—	Wind south-east; small waves; flowers in bloom on plain and foot of hills.
					21·5	25·0	

That there has been a general rise in level of the waters of the Dead Sea is evident on all hands. The disappearance of the island Rujm el-Bahr,[1] the changes at 'Ain el-Feshkhah, the disappearance of the passage round the foot of Râs el-Feshkhah, the submergence of the causeway which, within the memory of people now at Kerak, used to connect the western end of the *Lisân* with the west shore of the Dead Sea, and, lastly, the changes near Jebel Usdum, all demonstrate that the rise of level is general. It occurs to me that it might be a help in clearing up the question of how much the level has risen in recent years if a series of soundings were taken at such places as over the situation of the Rujm el-Bahr, off Râs el-Feshkhah, &c. In October I specially visited the shore in the neighbourhood of the Rujm el-Bahr with a Bedawi who knew it well, but no sign of it was to be seen, nor was there any evidence on the surface of the sea of a submerged island. The water must be a considerable depth over its highest point.

Observations on the Level of the Sea of Galilee during 1901, *taken at Tiberias, by Mr. Rasheed Nassar, and forwarded by Dr. Torrance.*

It is probable that very shortly a new and more convenient means of studying the lake will be opened up. The commodious little steamer which has been lying many months in the Jordan

[1] *See Quarterly Statement*, 1900, p. 273 *et seq.*

is said to have received, or shortly will receive, a firman from H.I.M. the Sultan. It is proposed to make a daily circuit of the lake for the benefit of travellers at very moderate charges. The first boat was not powerful enough to make headway against the wind, but on this the engine (20 horse-power) is supposed to be fit to meet any ordinary weather.

'AIN EL-FESHKHAH, EL-ḤAJAR EL-AṢBAḤ, AND KHURBET ḲUMRÂN.

By Dr. E. W. G. Masterman.

'Ain el-Feshkhah (عين الفشخة) is the name given to a district abounding in springs at the north-west corner of the Dead Sea. As I have during the past 18 months paid no less than 12 visits to this little-visited spot, I think a short account of it may be of interest. The brief descriptions of Lynch (1848), De Saulcy (1851), and Tristram (1864) differ in many important points from what is found in the district to-day.

'Ain el-Feshkhah may be reached from Jericho in from two and a half to three hours on horseback. The first half of the way, nearly due south, over the plain of Jericho, is an almost level track until the Wâdy Dabr[1] is reached. This great ravine commences abruptly, where the Wâdy el-Ḳaneiṭerah leaves the mountains, in a succession of precipices down which the winter torrents have worn a narrow hollowed-out channel for themselves. The first quarter of a mile is a narrow winding ravine with sides, almost perpendicular for some 200 or 300 feet, consisting of limestone below and soft sedimentary deposit above. Further east the valley opens out to a width of perhaps 300 yards, the sides in places being composed of perpendicular cliffs of 150 to 200 feet in height, consisting of parallel strata of gravel and fine sand. The centre of the ravine is a torrent-bed of rounded stones; it is almost always dry. I found water in it on only one occasion, and that but a small stream, although immediately after heavy rain. Where the road to the *'Ain* crosses the valley there are two well-marked terraces, one above the other, between the torrent-bed and the level of the plain. On the lower one on the left side, and on the upper one on the right side of the valley, there are evidences of recent occupation by Bedawin.

After mounting to the plain and proceeding southwards, the road

[1] [*Cf.* the name W. [ed-] Dubbâr in the *Name-Lists*. Baedeker gives the spelling ed-Dabr, but Dr. Masterman writes that he has never heard it given with the article.—Ed.]

gradually converges towards the western hills, and soon the traveller notices a large white stone standing between him and the hills. It is about 20 yards west of the path, a little to the south-east of the peculiar rock figured by Prof. Clermont-Ganneau in his "Researches" (vol. ii p. 10, *seq.*), and shortly before a "small natural bridge" may be seen in the rocky hill to the south.

This stone is el-Ḥajar el-Aṣbaḥ ("the white stone"), a landmark very well known to all the Bedawin. I have on several occasions had it pointed out to me. It is a prominent object, especially when the sun shines upon it, its brilliant whiteness standing in bold contrast to the dark reddish rocks all around. It stands near the foot of the hills, but too far for it to have reached its present position naturally. From a short distance it looks like the capital of a large column, for which indeed I at first mistook it, but on nearer examination it proved to be a rough unworked block of hard limestone without any carving or inscription. Its measurements are as follows:—Length, 4 feet 6 inches; breadth, 2 feet 8 inches; height, 3 feet 7 inches; and girth, 11 feet 5 inches. The Bedawin have a tradition that it is Lot's wife and child and donkey turned into stone! This stone, though apparently the same one as that mentioned by De Saulcy ("Dead Sea," vol. ii, p. 48), appears to be quite different from that identified by M. Clermont-Ganneau (*Quarterly Statement*, 1874, p. 80, *seq.*) as el-Ḥajar el-Aṣbaḥ. His stone is one of several dark reddish stones which have evidently fallen from the cliff above, a few hundred yards to the north-west; these also are visible from this point, but there is nothing characteristic about them. His measurements point to a much larger stone. The position of this, however, which I believe to be the true Ḥajar el-Aṣbaḥ, is much nearer to the peculiar rock he associates with the name Ṣaḥṣûl Ḥameid than his stone. Since I found out the discrepancy I have made inquiries, but those who know the locality best are positive that this white stone is the landmark. It is quite probable that Bedawin may, if their suspicions are aroused, try to prevent those whom they suspect of some ulterior motive, from finding the right stone.

From this point the road is very rough and stony until, after about three-quarters of an hour, 'Ain el-Feshkhah comes in sight. At this point, by making a small diversion to the south-west, the remains known as Khurbet el-Yehûd or Khurbet Kumrân may be visited. They are described in the Palestine Exploration Fund "Memoirs" (vol. ii, p. 210, *seq.*) and elsewhere, but no suggestion is made regarding their origin. The ruins consist of some enclosing walls, and, in the centre, the remains of what may well have been once a small fortress, but now only heaps of large stones and the outlines of walls remain. Close to these is a *Birket* (pool), in fair preservation, partially plastered, with the remains of a flight of steps from the north end. It is 67 feet long, 16 feet 8 inches broad, and (at present) 10 feet deep. To the westward of the ruins, and extending towards the western hills, there are remains of what appears to have been an aqueduct.

The whole of these ruins stand on a commanding position, surrounded on all sides, and especially to the south, by steep declivities ; at one point at the north-west corner, however, a narrow neck connects it with the plateau to the west. From this site every part of the 'Ain Feshkhah oasis and all its approaches can be overlooked ; it is, also, a fresher, healthier situation than any spot in the plain below. I found a fresh breeze there when on all the lower ground it was hot and still. The site is just such a one as would have been chosen in, say, Roman times to protect the springs and the road passing through the district to the south, a road which very possibly at such times may have been continued along the shore round Râs el-Feshkhah.

It is more difficult to suggest an explanation of the great cemetery which lies on the same hill to the east. Here are upwards of a thousand well-arranged graves, each one covered by carefully-ordered stones. They are much more carefully made than ordinary Bedawin graves ; the orientation is not that of Moslems, and an examination of one which was opened by M. Clermont-Ganneau in 1874 showed, at the depth of a metre, "a bed of rough clay brick . . . . resting on a kind of flange cut in the earth itself." The head lay to the south. At present, at least three of the graves have been exposed and lie open.

Viewing the 'Ain Feshkhah oasis from this hill it is seen to be confined in a triangle. The northern side or base is the Wâdy Ḳumrân, which lies at the foot of the hill. The apex is due south, close to Râs el-Feshkhah, where the mountains fall sheer down into the sea. To the west, the mountains, from the steep crater-like head of Wâdy Ḳumrân, all the way to Râs el-Feshkhah, are composed of exceedingly rugged and broken limestone and conglomerate, more than 1,500 feet (Tristram) in height, and almost precipitous. There is only one exit from this district to the south, and that an exceedingly rough ascent, about 40 minutes steady climbing, which commences near 'Ain el-Nahr ('Ain el-Feshkhah). This is the pass described and depicted in Tristram's "Land of Israel," and marked in some maps as if it were a made road. It may have been so once, but now in many places it is almost impassable for led horses. I have returned to Jerusalem this way three times, but on the last occasion almost lost a horse over a declivity. A very noticeable feature of these mountains, as viewed from the oasis, is the raised terrace which runs in almost a straight line along the face of the cliffs. It consists of the usual soft marl of this part of the Jordan Valley and lies as a narrow edging to the height of about 70 feet. It is shown somewhat diagrammatically in an engraving in Tristram's "Land of Israel," p. 253.

Turning to the seaward boundary of the district, we find that on calm days it is marked out about a mile from the shore by a wavy line of white foam. This commences a little to the north of the springs, and is lost to sight round the headland, although from other observers we know that it extends all down the western shore of the sea. It consists of a continuous line of tenacious soapsud-like froth which, under certain

(*To face p.* 162.)

View of Râs Feshkhah from Kh. Kumrân.

View of Wâdy Dabr.

conditions, is carried out from the beach. I am inclined to think the outward movement of the warm water of the springs which rise all along the shore at this part have much to do with the distance from the shore at which it lies. Another factor seems to be a westerly breeze : on days when the white line is marked the air in shore has always been particularly still, whilst on ascending the hills I have found a steady westerly breeze. Probably it strikes the sea about that point. A southerly or south-easterly breeze, as I have witnessed on several occasions, will break the line into great masses like miniature icebergs, some a foot and more across, and 9 inches high, which fleck the sea in moving spots of white until they are finally driven to land in an almost continuous frothy line along the northern shore. On rough days the line is invisible, but great quantities of similar foam are lashed up along the beach by the breaking waves.

The shore adjacent to 'Ain el-Feshkhah consists of a shingly beach for a distance of about two and a half miles. At the northern part the beach is about 3 feet high when the water is lowest. Seawards there are remains of submerged rocks and bushes for a considerable distance, and the shore is covered thick in places with piles of broken reeds and the shells of fresh water crustacea. It is quite evident that the sea has greatly encroached.

The line of beach is broken at four points. The first and northernmost is one where the marshes break through, as it were, for a breadth of perhaps 20 yards. Here a crossing must be made, even when the sea is at its lowest, by wading through slimy mud and water, planting one's feet where possible upon the masses of dead reed roots covering the bottom. A few yards further south two little streams of slightly brackish water are encountered. These are known to the natives as Seil ed-Dowa. These streams carry to the Dead Sea the waters of most of the (northerly) springs of the district. They run from the north end of a lagoon, a third of a mile long, and from 50 to 150 yards wide, which lies at this part between the reeds and the sea beach. The water of this lagoon is at present brackish, and from 1 to 2 feet deep. From the great number of dead reeds standing out of the water I think that at times, perhaps during storms, the salt water invades this area. This is further confirmed by the fact that to the landward side there lie among the reeds a number of dead tree-trunks, evidently washed up by the sea.

At the south end of this lagoon, Seil el-Mabneyeh, a quick-running little stream from 'Ain el-Mabneyeh, enters the lagoon after skirting the gravel beach for some distance. The stream is at this part about two yards wide, and half a foot deep ; it runs fast even in the dryest season, and swarms with fish. In the lagoon itself I did not observe any fish. The next break in the seabeach is about half a mile further south, where 'Ain en-Nahr (usually called also 'Ain el-Feshkhah) breaks directly through to the Dead Sea, flowing over the extensive remains of a reed thicket. From the descriptions of previous travellers I am inclined

to think that before the sea encroached[1] the waters of this spring also formed a stream (hence the name *Nahr*, river) which skirted the inner side of the beach, and joined the Seil el-Mabneyeh and the lagoon. Southwards from this point the beach is much lower, and when the Dead Sea rises, *i.e.*, in the spring, is practically covered, except where, as one approaches Râs el-Feshkhah, it becomes strewn with large boulders from the cliffs above. The whole shore here abounds in small springs, and is covered with reed roots extending out under the Dead Sea water.

I have it on the authority of a most reliable Bedawî that in the days of his father there was beach all the way round the base of Râs el-Feshkhah, so that he was able to get round that way. Now, and in Tristram's time, the Dead Sea washes perpendicular cliffs at the *Râs*. Lynch, in his description, seems to imply there was low ground between the cliffs and the sea.

Turning our attention now to the land, it will be most convenient to describe the oasis as it is viewed from the road traversing it from north to south. This "road" is little more than a track lying amongst the confused heaps of stones in which De Saulcy thought he saw the remains of Gomorrah. The springs and the surrounding marshes are marked out by the great clumps of reeds growing from them. In the northernmost group are two springs, known as 'Ain ej-Jidy (عين الجدي) and 'Ain Ratam (عين رتم). These rise in the midst of a thick marsh overgrown with reeds; some of their waters find their way seawards by the marshy outlet through the beach described above, and some flow into the lagoon and thus seawards by the Seil ed-Dowa. Between this first clump and the next the reeds become a thin fringe skirting the lagoon, the ground between them being stony and dry. The second group not only extends westwards up to the road, but actually crosses it and forms at the foot of the mountains a small thicket, known as Haish el-Muḳdâm (هيش المقدام). The great mass of the watered area to the east of the road consists of a reedy marsh, recently partially cleared where the ground is solid, in which rises 'Ain Ghuzál, and an open area (long cleared of reeds) in which rises the most important spring of the whole group, 'Ain Mabneyeh (عين مبنية). This spring rises in a small pool about 4 feet across and 3 feet deep, whence the water runs as a fresh, limpid stream along the north edge of the cleared area, to find its way as the Seil Mabneyeh to the lagoon described above. The "cleared area" was once largely overgrown with reeds, but these have been destroyed

[1] Since writing the above I have been informed by a Bedawî whom I met at the spring, that it is just six years since the sea "ate the spring"—as he expressed it—by breaking over the beach here, and forming the pool to be described later on. He called this spring 'Ain el-Feshkhah only, not 'Ain en-Nahr.

(*To face p.* 164.)

View of Drybed of Waterfall in Wâdy Dabr.

by the Bedawin. From time to time other places, where the ground is moderately solid, are cleared by burning the reeds, the young sprouting shoots that spring up affording excellent fodder for the cattle. A considerable section has been so treated since first I visited 'Ain el-Feshkhah. The water of 'Ain Mabneyeh is slightly tepid, and brackish, but not disagreeable to drink. Neither here nor anywhere in the district could I detect any of the "sulphurous fumes" spoken of by other travellers.[1] The *'Ain* itself affords a delightful bath; the sides of the spring and banks of the stream are lined with the roots of reeds that have been destroyed. Between this *'Ain* and the next there is about a quarter of a mile of slightly elevated, exceedingly rough ground—the mouth of a rift in the mountains, known as Wâdy Semâḳ. In this Wâdy is a cave, partly artificial I think, in which potash has been made from time to time by burning plants growing in the district. The floor is thick with ashes and the walls quite black, except for numerous light mud wasps' nests scattered over them. Towards the sea a thick line of reeds connects the growth round 'Ain Mabneyeh with that to the south.

The spring we now approach is that usually described as 'Ain el-Feshkhah, though the Bedawin to-day call it 'Ain en-Nahr. It is a little difficult to know to what one should apply this name, because there are so many springs rising at this spot. They all empty themselves into a pool about 60 feet across, surrounded two-thirds of its circumference by tall reeds. First, there is a considerable spring rising at an open spot (trampled hard by goats and cattle) to the west and some feet above the pool. Secondly, at the south-east corner of the pool a stream about a yard across flows with considerable force from among the reeds. Thirdly, there are several springs in the pool itself, notably from under a large rock in the centre. The salt water of the pool is full of currents of warm, fresh water from the springs. Near the western end the water is only slightly salt, and there are many fish. The pool is considerably larger after the rains—rising and falling of course with the Dead Sea, with which it is in direct connection. I found a difference of 2 feet 4 inches in the depth during the year as measured on the rock in the centre.

From this pool the reeds extend in a thinner and thinner line (they have lately been largely burnt down) for about a mile towards Râs el-Feshkhah. They are kept alive by numerous small springs which burst forth just at the water's edge. Some indeed can be seen rising under the sea itself. One of the most considerable of these submarine springs is close to our observation-place. Under the observation-rock itself there rises a spring known as the spring of the gazelles—'Ain el-Ghezlân (عين الغزلان). It is quite drinkable water and perennial in supply. Even beyond the fringe of reeds there are many small springs, so that

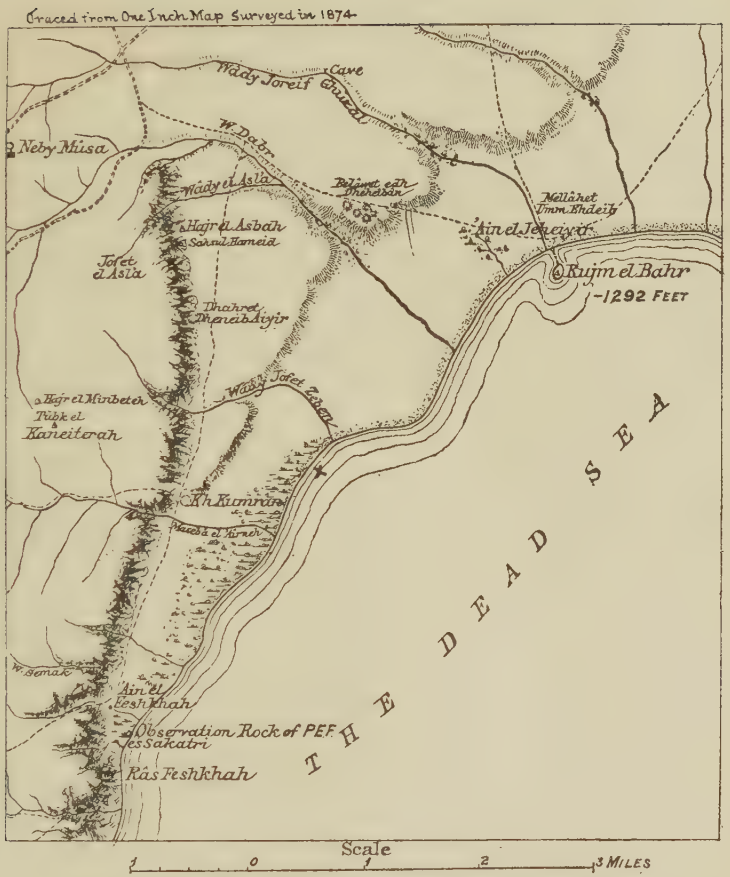
[1] On my last visit, however, whilst wading the 'Ain el-Feshkhah pool in nearly a foot of rotting sediment below the water, large bubbles of gas arose around me, having an unmistakable odour of sulphuretted hydrogen.

taking all together the amount of fresh water running here into the Dead Sea must be very considerable.

The district round 'Ain el-Feshkhah is deserted for the greater part of the year. I have ridden from Jericho to the *'Ain* and back again without encountering a single person or any sign of human presence. Early in the year, in January and February, Bedawin descend into this part of the plain, and flocks of goats and sheep and also camels may be seen on all hands. The Bedawin at this time inhabit caves in the hills round. The 'Ain el-Feshkhah oasis itself has been tenanted for some eight months now by two men (natives of Abû Dîs), who are in charge of a large herd of cattle, belonging to the Sultan, which thrive in the reeds. The men collect and dry rushes, which are sold for basket-work. As regards wild animal life, one of the men told me there are wild boar in the marshes, which is probable. There are storks, kingfishers, hawks, and many small birds. Jackals, conies, and gazelle are found on the hills around, and the ibex has been seen in the neighbourhood. The fish I have seen caught in the pool were *Chromis niloticus*; there are also varieties of *Cyprinodontidae*.

February 19th, 1902 *Condition of White Line.*—On approaching the district the whole surface of sea was misty, distant mountains almost obscured, heavy clouds and occasional showers. At this time no white line could be seen, but about a mile from the shore a dark line, wavy in outline, could be made out lying in the usual position (when present at all) of the "white line." It terminated to the north-east of the 'Ain Feshkhah district, just as the white line did. Later on, when the wind veered and the sun was out, I noticed in the distance that there was something of a white line (when some distance off the "white line" cannot be well seen, except from higher ground), and as I was leaving, about noon—a south-east wind then blowing—the white line was then being driven inshore, becoming crumpled together as it were. The north end was then close to the lagoon, a few minutes later it was south of the lagoon, and as I finally left almost all of it had been blown ashore.

Condition of Vegetation.—Plain of Jericho, dotted over with flowers, specially large patches of yellow compositæ. At 'Ain Feshkhah (on the rocky bases of the mountains) flowers in bloom on all sides, specially several varieties of yellow daisy-like compositæ, white and violet cruciferæ, &c. The Jericho plains (on the road to the *'Ain*) almost deserted again—only encountered two small flocks of sheep; Sultan's cattle have left the *'Ain*. One man was seen, a Bedawî (one of the Ta'âmerah Arabs), who was hunting ibex in the mountains.



× The " white line " generally ends near this point when it is quite distinct.

The great rise in the level of the Dead Sea since the survey was made in 1874 has completely altered the coast line as represented on the map, and covered the little island Rujm el-Bahr, upon which one of the trigonometrical stations was erected. It has consequently been found impossible to lay down with any accuracy the positions of the small springs mentioned by Dr. Masterman, and they have been omitted.

THE GERMAN EXCAVATIONS AT BA'ALBEK.

By F. J. Bliss, Esq., Ph.D.

The excavations at Ba'albek, under the patronage of the German Emperor, have now been going on for over 15 months. The officers in charge have been the accomplished architects Messrs. Schültz and Kreucker, and Professor Puchstein, of Berlin, has made two visits of inspection. Owing to the cordiality of these gentlemen towards a brother excavator, I have been able to follow the details of the work for the past year. However, as they themselves have not as yet published a full report, I must confine myself to such observations as the ordinary traveller would be permitted to make.

The aim of the work has been, by clearing away the later accumulation of *débris*, as well as later constructions within the enclosure, to bring to light all that remains of the temples at the time of their destruction, and thus to secure the data for a reconstruction of the original design. This work has now been practically accomplished in the Great Temple, and attention is now being directed to the Small Temple, popularly known as the Temple of Jupiter. As all visitors to Ba'albek will remember, the Great Temple includes: first, a rectangular portico; second, a hexagonal forecourt; third, an immense square court; and fourth, the temple itself with its huge columns. Excavations have proved that the *stylobate* of the hexagonal forecourt, also of the great court, has the usual three steps. Abundant proof is forthcoming that these steps were never finished. A similar sinking may be observed in the great court. The steps were well ornamented with statues from point to point, as proved by the discovery of inscribed bases cut back so as to fit the steps of the *stylobate* of the great court. The Basilica which occupies the western end of the great court has been carefully excavated and left standing. It will be rememberedthat the three apses point to the west, but signs of an eastern apse have also been discovered. In later times the temple enclosure was used as a fortress, within which were built numerous dwelling-houses, with fountains, an elaborate drainage system, &c. After careful planning, most of these have necessarily been removed,

but enough has been left at one or two points to illustrate the vicissitudes of the history of the place. I have said *necessarily removed*, for to have left them standing would have prevented the discovery of the original construction which they buried. Chief among these is the great altar of sacrifice, about 28 feet square, which stands before the steps leading from the great court to the temple itself. The foundations of this altar are practically complete, and two sides remain practically intact. It is about 7½ feet high, and is approached by steps at the east end. It is interesting to note that its top was once immediately buried by the pavement of the Christian church. On either side of the altar are two large rectangular tanks or pools. Curiously enough these are not of the same size, nor are they symmetrically disposed with reference to each other and to the altar. The largest one lying to the north of the altar, measures about 63 feet long by 21 feet broad, and is about 3½ feet high. Three sides are completely preserved, together with the fourth angle. These sides are divided into panels, elaborately carved with wreaths, human heads, cupids, bulls' heads, marine monsters (some of which have the form of Tritons), figures in groups, &c. The work at different points shows various stages of execution, from a rough blocking art to an exquisitely finished carving.

The work of removing so great an amount of *débris* has been facilitated by the use of a small railway with trucks. Advantage was taken of a breach in the north-east angle of the enclosure to carry the earth out into the neighbouring fields. One line of rails was laid through the vaults, through which the enclosure is usually approached, and these were cleared out for the purpose.

Recent visitors must have noticed that the loosened key stone of the lintel of the doorway to the Small Temple had been supported by a rudely-constructed pier. This key stone has now been forced into place, and the pier removed. I may add without prejudice that the architects regard the Cyclopean foundations to the west as an integral part of the Roman work, pointing out that the raising of such huge stones into place presents no greater difficulties than the erection of the great Roman column. In this connection I may also add that Dr. Carslaw, of Mount Lebanon, pointed out to me that the corner of one of these huge stones is broken off, revealing the comb-picking on an inside face, which must have been dressed before the stone was laid *in situ*.

I have confessed to a growing scepticism as to inferences to be drawn in Palestine from stone-dressing, in our present state of knowledge, but if, as Dr. Petrie holds, the comb-pick was a Greek introduction, this fact would militate against the theory of a Phœnician origin of the Cyclopean wall.

In addition to this Ba'albek work, Herr Kreucker has made some minor excavations at Nîḥâ, which is situated in a gorge a few miles north of Zaḥleh, and he favoured me with a sight of his exquisite reconstructions of the small temples there excavated. The existence of these temples has long been known, but this is the first careful study made of them. While the work at Ba'albek has been wonderfully successful from an architectural point of view, the number and value of the smaller finds have been disappointing. Apart from some interesting inscriptions, mainly on the bases of statues, the finds consist of coins, Arab pottery, small fragments of carving, &c.

The branch line from the Beirût-Damascus railway to Ḥomṣ and Hamath will have its junction at the mouth of the Wâdy Yaḥfûfeh, a gorge of the Antilibanus, the station being Reyâḳ, on the eastern edge of the plain. Work is progressing rapidly; trains as far as Ba'albek are promised for about Easter, and the line will be opened as far as Hamath in the autumn. It is to be a full-gauge railway, in contrast to the narrow-gauge line from Beirût to Damascus. The opening of this line will greatly facilitate the trip to Palmyra, as the journey from Beirût to Ḥomṣ may be made in one day, and Palmyra is easily accessible by a carriage ride over the plains which stretch between it and Ḥomṣ.

The Germans at Ba'albek.

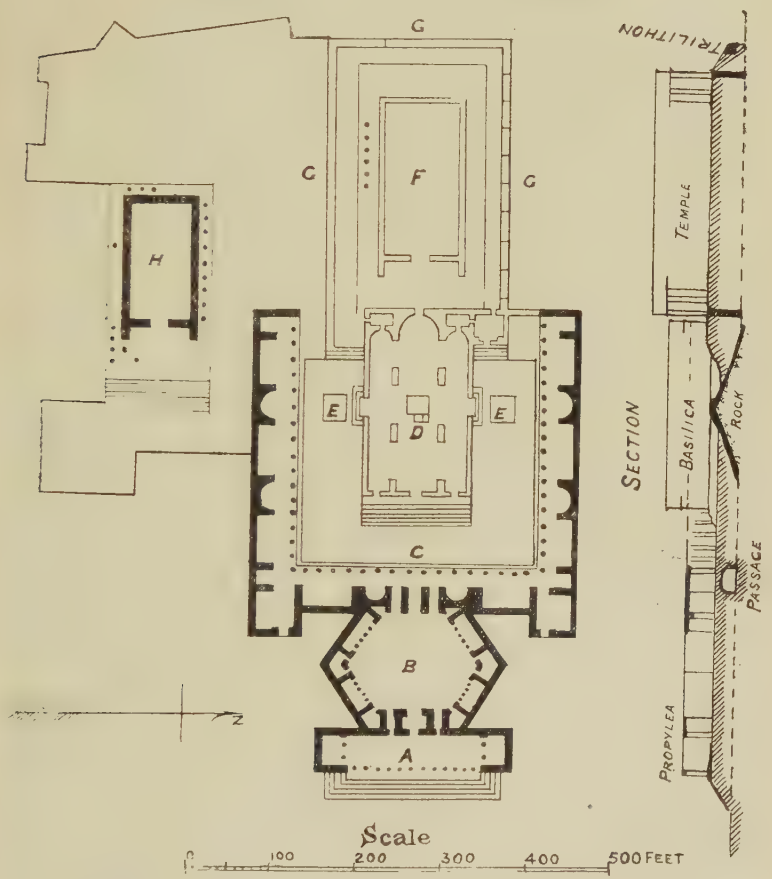
(*By permission, from "The Builder" of January 11th*, 1902.)

The "unearthing" of the ruins of Ba'albek, which the German Government is at present engaged upon, promises to be an important and imposing addition to the series of ancient sites which have been opened up in the Levant during the past half-century. The excavations are on the scale of those at Olympia, and the enormous mounds of earth which are slowly accumulating on the north side of the ruins impress the beholder with the magnitude and thoroughness of the work, and of the vast sums which are being expended upon it.

The following observations on the progress of the work, made on a casual visit, are in anticipation of the exhaustive and voluminous work

which will doubtless be published by the authorities in Berlin before very long.

SKETCH-PLAN AND SECTION OF BA'ALBEK.



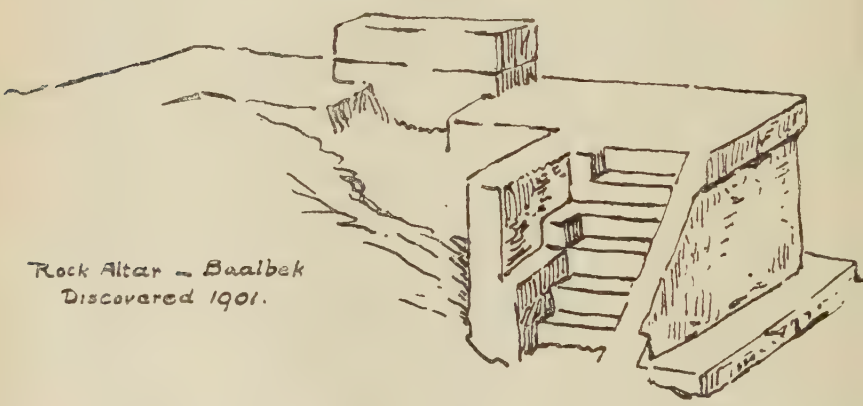
A.—Propylea.
B.—Hexagon.
C.—Great Court.
D.—Rock Altar covered by Christian Basilica.
E.—Lavabos.
F.—Great Temple (unexplored).
G.—Ring of Great Stones.
H.—Small Temple (unexplored).

In the first place, the plans of the group of buildings in the Classic period, and in the early Christian and Mediæval Arab times, can now be intelligently studied. Of the more ancient or prehistoric epoch, before the coming of the Romans, there seem but few traces, but still the centre

feature of the whole site, its *raison d'être*, in fact, is of this earlier period, and of singular interest as such. This central feature is the rock-hewn altar platform round which the Roman buildings have been planned as an ornamental enclosure.

Referring to the accompanying plan, it will be noticed that the centre of the whole group of buildings is a rock which, in a primitive age, must have risen to a trifling height above the plain or flat level of the Valley of Cœlesyria. This rock seems to have been sculptured into one of the not uncommon altar platforms of the prehistoric style. It would probably be one of those altars used for human sacrifice, and at one side are still preserved the rock-hewn steps up which the victims would be led for the purpose (fig. 1). Similar examples of such rock-cut altars occur elsewhere in Palestine and Syria. Previous to the coming of the Romans the rock

Fig. 1.



would probably have retained its natural form, the site being sufficiently conspicuous for the purpose of an open-air assemblage, and the open ground around affording an excellent expanse for the purpose. This rock-hewn altar platform was probably hollow, with a natural cavity like the larger example on Mount Moriah, Jerusalem, but this has been a good deal broken through at one side. Inequalities in its squareness of form have been rectified by adding blocks of masonry, which in after times, when the destruction of the monument was contemplated, have been overturned and left abandoned.

The Emperor Caracalla is credited with introducing the Roman architecture on the site, which astonishes if it does not charm the beholder at the present day. But such monuments would require many years for completion, and indeed a great part of the buildings bear evidence of never having been completed. In the days of Theodosius, nearly a century later, the work of building the exedræ and outer portions of the group of temples was still going on.

We know so exceedingly little of the religious rites and ceremonies of the ancients and of the systems preceding Christianity, that little can be defined as to the destination and use of the different parts of this great monument at Ba'albek. The Romans presumably found the rock altar shrine of Baal (or the Sun) in the condition in which it still exists. They surrounded it on all sides by a series of walls making up a terrace or platform level with the base of the altar in a way which was commonly used in fortification. On the east, north, and south sides these walls constituted passages and chambers under the general level of the platform, and on the west side the great temple filled up the space on a huge artificial mound of earth. The basement or lower storey of the platform is built of huge blocks of limestone which have never been squared on the face, but only at the jointings. The same system of leaving the masonry to be brought down to a general surface after placing in position has been adopted all over the buildings, sometimes with a finished surface partly completed, but with the edges left raised so as to avoid injury to the jointings in the process of handling. These raised edges were intended to be removed at the completion of the work.

On the walls of the substructure surrounding the great court of the rock-hewn altar was raised the singular colonnaded ambulatory with its square and semicircular chambers. This magnificent colonnade is one of the features of the ancient design which has just been brought to light. The object of this peculiar arrangement of chambers surrounding the great atrium is not very apparent. On each side of the great altar was a lavabo, or shallow basin of water, formed by a low wall, with sculptured panels on the outside filled with winged genii, &c., and festoons of flowers. In some cases this decoration has been left unfinished; evidently these water basins were among the latest additions to the monument.

The existing superstructures of the great platform are too well known to need description; but the splendid colonnade which once closed them in had hitherto escaped notice, none of the columns being *en évidence*. It stood on three steps leading down into the great atrium, and probably resembled the design of the three-sided colonnade of the basilica of Constantine at Jerusalem, with which it was almost contemporary.

On the west side of the great atrium stood the famous Roman Temple of the Sun, once one of the largest in the world, but now reduced to the insignificant proportions of merely six columns. The Germans have made but slight progress in exploring the heap of earth which still covers up its basement, but sufficient is already laid bare to explain its construction and to account for its ruin. In designing this stupendous building the Roman engineers adopted a system of construction of great originality, but wanting in those elements of stability which we usually associate with the Roman name. On the west side of the great prehistoric altar there had originally been nothing, and here the Romans created a large artificial mound of earth on which to raise their great temple with its floor somewhat above the level of the altar atrium. The

atrium was surrounded on three of its sides by a continuous colonnade, and on the fourth the space was occupied by the columns of the temple façade, and the steps leading up to the higher level. The origin and purpose of the famous great stones—the trilithon—which have been the wonder of all ages, are now explained. The great artificial platform of the temple was surrounded on three of its sides with a continuous ring of these enormous stones (60 feet long) for the purpose of steadying the mound of earth, placed at a distance of about 20 feet from the substructure supporting the great colonnade, and forming at the same time the lower course of steps of the platform. The three great stones on the west side of the platform have always been exposed to view, those on the south side have only just been discovered and are at present being laid bare. On the other sides of the temple the level of these stones is still covered up with earth and *débris*, and masked by the Arab fortifications of the Middle Ages. Carrying on to some extent the same idea of construction in all the buildings, the temple and its atrium become the upper storey raised about 50 feet above the original ground or rock level. The lower storey consists of long vaults and, in some cases, vaulted apartments, but the chambers which probably exist under the great temple have not yet been found.

The present excavations are not extended much beyond the great atrium, and the result of them is wonderfully interesting and complete. The spectator is able to realise at a glance the original appearance of the monument, whereas before the Germans commenced operations all was chaotic and unintelligible ruin. The destruction of the surrounding colonnade is, unfortunately, complete, but the paving of the great court, the lavabos, &c., seem not to have been at all disturbed.

The Classical Temple was one of the last to be closed by the edicts of Theodosius, and apparently the army of building operatives which was employed upon it until the very last was provided with work of a new type immediately upon the change of religion. In the centre of the great atrium stand the remains of one of the earliest of the Christian basilicas of the fourth or fifth centuries, North Syrian style. This basilica, perhaps following a local characteristic, is also built on a raised platform of earth, but the earth has been raised in this position for the purpose of covering up the constructions of the Classic period. The early Christians evidently thought to convert the old site to their use, but did not dare to destroy it altogether, so they allowed the rock-hewn altar to remain where it has just been discovered, buried in the centre and under the floor of the new Basilica. The three apses of the new Basilica were built on the steps of the east front of the temple, and the baptistery seems to have been formed out of an "exedra" or chamber at the same end of the building. The altar of the Christians was, of course, to the west, and the building was covered with wooden roofs supported on nave arcades of phenomenal span.

The ancient enceinte of Ba'albek was turned into a regular fortified town during the Byzantine period; a main street lined with dwelling-

houses leads down the south side of the great temple, but many of these remains will, of course, be destroyed by the German excavations. The Arab constructions of a still later age will absolutely disappear as the work progresses. Such a fate is, perhaps, inevitable, although much to be regretted. The amount of interesting information which has already been gained upon the subject of the older religion and its monuments must be a compensation for the loss of later history and Arab associations.

HEBREW WEIGHTS AND MEASURES.

(See "Quarterly Statements" for July and October, 1899.)

By Colonel C. R. Conder, LL.D., &c.

Having read carefully the valuable papers by Sir C. Warren, I venture to approach the question of Hebrew metrology from the point of view of actual remains, rather than from any theory of proportion. The results do not conflict, but I think in detail that other proportions may be established pointing either to different ages, or to various sub-divisions of the units—which may have co-existed.

The accuracy of the ancients was not apparently as great as that of modern systems, and the measurement of ancient buildings generally shows this. Units so derived are liable to error from several causes. 1st, that the original measures were not quite exact—angular measurement especially. 2nd, that when a large number of measurements are collected from various sources some may have been less careful than is required, and measurements in feet or metres may be influenced by the modern units. 3rd, that such measurements are capable of being referred to more than one unit. Unless actual measuring rods, measures of capacity, and weights can be consulted, no decisive check can be established, and scholars have deduced different conclusions from the same data, and from the same literary statements. In our own time the accuracy of Orientals is still inferior. In Palestine the measures of capacity, and the value of European coins, differ among the peasantry in almost every village. But among the Jews and Babylonians standard measures certainly existed, which kept the various units fairly constant.

In Orientation Dr. Peters observes that the angles differ by as much as 8° in various *Ziggurats* placed with the angles to cardinal points.[1] In Egypt the known specimens of the cubit vary between 21·05 and 20·47 inches, according to Sir Gardner Wilkinson.[2] In Jerusalem the height of the "master course" of the south wall of the Haram differs—as Sir C. Warren informs me—by some 4 inches in various parts; and the same absence of complete accuracy is observable in extant weights. But the variations do not forbid us from obtaining substantial results, which may be stated in round numbers.

That the Babylonians—perhaps as early as the seventh century, or earlier—calculated the squares and cubes of numbers we know from extant tablets. The Egyptians did the same, and no doubt used the abacus as Sir C. Warren states. In the Rhind Papyri (No. 79 on Plate XX) occurs an instance (*see* the paper by Mr. F. L. Griffith, "Proc. Bib. Arch. Soc.," June, 1894, p. 241), where we are given the values of $7 + 7^2 + 7^3 + 7^4 + 7^5 = 19{,}607$. The total is correct, though 7^4 is made 2,301 for 2,401. Hence the sum was not reached by multiplication only.

The blunders in these Papyri, and the clumsy reckoning, show, however, that calculation was difficult, and that errors were often made. An attempt to compare the areas of a square and its inscribed circle (No. 48) fails. The area of the same circle in another case (No. 50) was apparently obtained pretty closely, though 60,000 is in one line incorrectly written for 6,000. A square of 10 × 2 *khet* (No. 49) is made to be 1,000 square cubits, but should be 2,000. Thus, although the proportion of the circumference and diameter had been measured as nearly as 22 to 7, yet the calculations of the Egyptians were not always correct.

Deductions from literary statements are also subject to doubt. Numbers (as we see in Josephus, in Manetho, and even in the Old Testament) were often miscopied. Comparisons with other systems were not always minutely exact, and the actual value of the unit compared is also often disputed. The text has sometimes been corrupted, and the statement is sometimes only approximate, as when the circumference and the diameter are in the Bible stated as 3 to 1 in proportion (1 Kings vii, 23). The dimensions and

[1] "Nippur," vol. ii, p. 120.

[2] "Ancient Egyptians," vol. ii, p. 386 (ed. 1878).

distances given by Josephus do not agree as a rule closely with the facts as ascertained by exploration, nor does he give the same measurement in parallel passages. These sources of error have led to many discrepancies in the results of calculation by various scholars.

Even monumental information is not always quite reliable. The variation in weights and in lengths may be due to the use of measures not up to the standard, or to the gradual depreciation of the standard itself, or to inaccurate measurement by the student (as in the case of certain Babylonian weights), or to uncertainty as to the amount lost by wear in the specimen itself.

The tendency to depreciate the standard is very general. The oldest Babylonian weights of 1500 B.C., or earlier, are found to be heavier than those of about 700 B.C. The drachma weighed about 66·5 grains in Attica about 600 B.C., and was apparently the origin of the Roman denarius which, under Augustus, weighed 60 grains, and was reduced within a century to about 53 grains by Nero. The tendency in trade was to reduce the weight, the capacity, and the measure of length in favour of the merchant. Hence in comparing standards it seems best to use the oldest perfect specimens and the longest known units of measurement. An "average" may mislead, and the question of date becomes very important.

The units appear to have had a natural origin. Such words as "finger," "arm," "foot," &c., used in Hebrew and in Arabic, show this for the lengths. The "barleycorn" was also a measure among Jews and Arabs, both for length and for weight, and it seems fairly clear that measures of capacity were intended to hold a definite weight of water (for liquid), and of barley (for dry) measure. But in such calculation we cannot rely on modern proportions or on modern barley. It has been conclusively shown by Darwin that domestic animals have largely increased in size and weight, and that corn under cultivation has also so increased. The average height of mankind in ancient times is a subject which is as yet imperfectly studied. In pre-historic France the early Palæolithic race of "Canstadt" was short though powerful, as was the "Grenelle" race, which resembled the Lapps. The "Cro-magnon" race, on the other hand, was tall. The Egyptians appear to have been slight, and the famous Thothmes III appears to have been a small man. Some specimens of Greek armour

also are small, but at Nippur[1] the bones of a very tall person (perhaps of Akkadian race) were found in a coffin of the Kassite age, or about 1500 B.C. The Semitic race has smaller hands and feet, at the present day, than have the Teutonic races, and I should suppose their average stature to be less. Sir C. Warren states the average of male adult Jews, "throughout Europe" at the present day, as 64 inches in height. This may be due to the large proportion of Polish and other poor Jews (as low as 63 inches); but if it includes all the prosperous German Jews of the west and the taller Sephardim it may not be far from the true average, and the ancient Semitic races were probably not taller than the modern. Stature depends on climate and on good food, and in neither respect are the earlier races of Syria and Babylonia likely to have been better off than the modern Arabs. An average of 5 feet 11 inches for grown men appears to me improbably high. The expression "cubit of a man" (*ish*, Deut. iii, 11) does not seem to mean more than "forearm of an adult male" (Fem. *ishshah*). With such reservations the question must be treated, and the whole of the proportions based as far as possible on extant specimens of the units, or on actually known measures.

Measures of Length.

There is no dispute as to the existence in Egypt of a cubit of about 20·6 inches,[2] divided into 7 palms. Specimens are known, and the "palm" was thus clearly about 2·95 inches, representing a moderate sized hand. There was also another cubit of about 21·6 inches, or less, in use, but not supposed to be equally ancient. The Egyptian cubit was likely to be used by early Greeks who were under Egyptian influence. As to the cubits of Babylon and Assyria we have no information founded on actual specimens, which, as far as I can ascertain, have not been recovered by any explorer.[3]

[1] Peter's "Nippur," vol. ii, p. 221.

[2] [It is curious that a cubit of 20·62 inches seems to have been one of the standards of measure in use in the construction of the ruins of Zimbabwe (J. T. Bent, "Ruined Cities of Mashonaland," 1896, p. 152).—ED.]

[3] The scale on one of the statues at Tell Loh (perhaps 2800 B.C.) bears no title to show what unit it represents. The length (10·53 inches) answers, as will be seen, very closely to the Hebrew foot of 10·66 inches. The text on this

Among the Hebrews we have an indication in the Siloam tunnel inscription giving the length as 1,200 cubits from the source to the pool. The actual length is about 1,707 feet, which would show that the cubit was not that of 7 palms of Egypt, and if the statement is exact it indicates 17·1 inches for the cubit used about 700 B.C. But there are several uncertain points in this calculation: (1) The number 1,200 is a round number and may be only an approximation. (2) The tunnel is very difficult to measure, and if not measured with great accuracy the result would be shorter than it should be. An error of a tenth in the distance of nearly a third of a mile would be possible for the ancient Hebrew measurers, and the attempt which I made in 1881 to discover measurement marks led to no result.

The measurements of Syrian barley made by Colonel Watson, R.E., quite agree with my own measurements, also of Syrian barley; yet his results do not seem to be incapable of another explanation. Sir Charles Warren has quoted the Arab authorities (*Quarterly Statement*, July, 1899, p. 228, note), who speak of a cubit of 144 grains of barley—6 grains 1 finger, 4 fingers 1 palm, 6 palms 1 cubit, but I am not aware of such a statement as made by Jewish writers. In the Mishnah ("Kelim," xvii, 9) we read of the two standard cubits in the Temple, and the commentators (*see* "Menachoth," 97*a*) state that the building cubit was of 6 palms, and that used for the vessels of 5 palms. The "finger" is stated as measuring 2 barleycorns in length, while 2 such corns in length were equal to 7 placed side by side.[1] If we take the width given by Colonel Watson (0·123 inch per corn) the 7 would measure 0·861 inch and the length of the corn would be 0·43 inch. This, however, is impossible, since the modern European barley (which is larger than the Syrian), when the point has not been broken in the bag, has (as I have ascertained from an average of 229 grains) a length not exceeding 0·35 inch. Either, therefore, the Jewish calculation is wrong, or the barley is to be measured not laid flat but on edge. The European barley, when laid on edge and closely packed, gives (as an average of about 130 grains)

statue is Akkadian, not Semitic Babylonian. This scale is divided into 16 parts (2 barleycorns each).

[1] The reference has been kindly given me by Dr. Chaplin. It is in the tract by Maimonides, *Sepher Torah* (ix, 9); and the labours of this great Jewish scholar on the subject are of high value.

a thickness of about ·095 inch, so that 7 grains on edge are closely equal to 2 laid end to end.[1]

The European barley is larger than that from which our measure "3 barleycorns 1 inch" was taken, and the weight is probably also greater than that of Palestine barley about 200 A.D. or later. It will be seen in dealing with weight that the Jewish barleycorn was the Imperial grain, whereas the European weight is apparently about 1·06, giving a carat of 3·18 grains.

Even the Syrian barley of to-day is probably both too large and too heavy for comparison. The old Arab *ḳîrât* gives a grain of only 0·99 Imperial grain, and a width of only ·111 inch. Hence we may fairly suppose that the Hebrew barleycorn of 1 Imperial grain represented a third of an inch in length, or 48 to the cubit, as against about 45·8 barley grains in the same length, which results from the measurement of 229 European grains laid end to end.

Measurements based on so small an object, when 144 or 48 have to be placed together, are liable to an error, which is largely increased when multiplied to the cubit length. It is safer to take larger units and work back to the smaller. Thus, we may commence with the longest Arab measure of the body, the *dhrâ'* or "arm," of 27 inches or less. It was used by Mejr ed Dîn in the fifteenth century, and his measurements of the Ḥaram at Jerusalem, though slightly short, are correct:—

77 *Dhrâ'* ..	173·3 feet, actual length		177
669 „ ..	1,505·3 „	„	1,514

This *dhrâ'* he calls the "common *dhrâ'*"; and the Stambuli *dhrâ'* is 26·66 inches. The *dhrâ'* is the "arm," and the half *dhrâ'*, or corresponding cubit, would thus be from 13·5 to 13·33 inches (evidently a cubit of 5 palms), while it is made up as below:—

Dhrâ'	27[2] inches	or	26·6 inches.
Rub'a	6·75 „	„	6·66 „
Ḳîrât	1·125 „	„	1·11 „

[1] This experiment I made by laying the barley grains along ruled lines on putty. They are thus prevented from slipping, and kept straight, but can be easily moved and packed.

[2] These are the modern Egyptian lengths, the second column being the corresponding Stambuli divisions of the *dhrâ'*.

This agrees with the barleycorn ·1125 or ·1111 inch wide, which corresponds to the light weight of ·99 Imperial grain. Hence the ordinary cubit of 6 palms would be made up as below :—

Grain	..	·1125 inch	or	·111 inch.
Finger	..	·6750 ,,	,,	·666 ,,
Palm	..	2·7500 inches	,,	2·666 inches.
Cubit	..	16·5000 ,,	,,	16·000 ,,

A cubit of 16 inches thus corresponds to the Stambuli *dhrâ'*, and may be taken as a round number.

If we follow the statements of the Talmudic commentators, we arrive at the same result for the Hebrew cubits. Probably no other writers have given as much attention to the subject; and the definition of weights and measures was of great importance to the Rabbis, in their earnest inquiry into the law. If we assume that the barleycorn was the unit of weight and of length, and that it was less than the modern European grain, we must suppose that it could not exceed ·33 inch in length, and, according to the Rabbis, had a thickness of ·094 inch. The results would be as follows compared with the Stambuli standard still known in Egypt :—

	Hebrew.		Arab.
——	Barleycorns.	Length.	Length.
		inches.	inches.
Corn	1	·33	—
Finger	2	·66	—
Palm	8	2·66	2·66
Hand	16	5·33	—
Span	24	8·00	—
Foot	32	10·66	—
Cubit (1) ..	40	13·33	13·33
Cubit (2) ..	48	16·00	16·00
Cubit (3) ..	56	18·66	—
Cubit (4) ..	64	21·33	—
Cubit (5) ..	80	26·66	26·66

The ordinary building cubit and the Moslem sacred cubit are thus about 16 inches; and the cubit of 10 palms (*see* Buxtorf, "Lex.," under *Ammah*) is equal to the Stambuli *dhrâ'*.

These calculations are, of course, only evidence of the measurements in use about 200 A.D., or later, which may not have been those of the early Hebrew age. But they are all we have, and they are probably reliable. It may be objected that a palm of only 2·66 inches and a span of only 8 inches are small. The hands of Orientals are smaller than the average Teutonic hand, and in both cases my own hand has just these measures, which are, therefore, not impossible. Nor is a foot of 10·66 inches unnatural. The *dhrâ'* or "arm," of 26·66 inches, might be thought very short, yet it is an extant measure in Arab metrology (the word itself being Arab), and no existing race is more likely to have preserved Hebrew measures. The stature of a man, 4 cubits of 16 inches, may appear short, yet it is the average of the modern European Jew.

The Jewish palm was of 8 barleycorns. The Egyptian palm was 9 barleycorns.[1] The longer (and, as is supposed, later) Egyptian cubit of about 21·4 inches was the Hebrew cubit of 8 palms, and may have been introduced by Semitic inhabitants.[2] The Egyptian cubit of 6 palms would have measured 17·6 inches. The Rabbinical writers could not have intended such a length, as it supposes a barleycorn 0·37 inch in length, or longer than the largest English barleycorn.

In Ezekiel is mentioned the reed of 6 cubits, of "a cubit and a palm" (Ezek. xl, 5). This is apparently 112 inches, the Arab *kaṣab* or "reed" of 108 inches (4 *dhrâ'*), representing the same unit for longer measures.

The cubit used by Josephus was apparently the same as that described in the Talmud. In describing the south cloister of the Temple ("Ant." xv, 11, 5) he, however, uses Greek feet. The measurements agree with the position of the Tyropœon bridge, of which the centre line is $63\frac{1}{2}$ feet from the exterior south-west angle of the Haram. This was made up as below:—

Outer wall	5 feet.
Side cloister	30 „
Pillar	6 „
Half central cloister	$22\frac{1}{2}$ „
Total	$63\frac{1}{2}$ feet.

[1] With rather lighter barley, about 51 lbs. per bushel.

[2] It represents an Egyptian cubit of the lighter barley (51 lbs. per bushel), measured by corns of the Hebrew barley (53 lbs. per bushel).

The Arab square measure takes as its unit the *kaṣab* of 108 inches. The Hebrew (according to Maimonides, referring to Exod. xxvii, 9, 12) took a measure of 50 cubits square (called *sĕâh*); and of these 30 went to the square *kôr* (75,000 cubits). Thus if the cubit intended is one of 16 inches, the *kôr* measured 3·03 acres, which is about three Arab feddâns (3·3 acres). No people are more likely to have preserved Hebrew measures than the Arabs of the great age of Islam—the seventh century A.D.

Measures of Capacity.

As to measures of capacity, we have even less actual information than in the case of the lengths. From the Rhind Papyrus (Plate XVI) we learn that a cubic cubit contained $1\frac{1}{2}$ *khar*, a unit which was divided into 20 *hekat*, and these again apparently each into 10 *henu*. The *hekat* was consequently the gallon. The various comparisons given by Josephus show the Jewish *bath* or *ephah* to be about 8·4 gallons, which would give a cubic *lôg* of about 32·7 cubic inches. This, however, does not agree with Rabbinical statements. That of Maimonides (on Peah viii, 5) is too indefinite for use, being stated in "thumbs" (of about 0·8 inch); but according to the Mishnah ("Peah" i 6) the *lôg* was equal to six hen's eggs. These are not likely to have been larger than they now are, and the *log* on this basis could not exceed 24 cubic inches.[1] It is, moreover, stated to have weighed 6,000 grains of water, which gives the same result, and the weights connected with these measures, if taken in barley, are also commensurate. The Egyptian system can be closely compared (*see* Tables) with such an unit; and it results that, if the pyramid barley weighed about 51 lbs. avoirdupois to the bushel, the pyramid coffer, which was 4 Hebrew *kôrs*—cubic measure—in capacity (or 12 *khars*), held 24 talents of corn.

But these two calculations are not of necessity irreconcilable.

[1] This results from measurement of the contents of eggs, which do not exceed 4 cubic inches. It could not have been the original unit, as poultry were unknown before the Persian period. The measurements were made by my father with great care. The statement cannot, at all events, apply to the *lôg* of Josephus. In 1 Kings vii, 38 the smaller bath appears to be intended, if the cubit be 16 inches. On the measurement of eggs *see* Colonel Watson's remarks, *Quarterly Statement*, 1901, p. 203, *seq.* These do not, however, agree with the weight of water in the *lôg*.

The smaller *lôg* may have been the dry measure, the larger the liquid measure, corresponding to the weights of barley and of water respectively. It has been assumed from Ezekiel (xlv. 10, 11) that liquid and dry measure were the same, but the passage refers to an ideal future—as also regarding weights. The proportions of the various Jewish measures of capacity are known, but the actual contents are still variously stated. If we accept the Mishnah as to dry measure, the following results will be noted. First the cube of the 16-inch cubit was 7 *sĕâh* in capacity, and the *bath* occupied a cube of 12 inches, or 36 barleycorns. This approximated closely to the Egyptian measures, obtained from the 20·6-inch cubit. Secondly, the *lôg* held just half a manah of Hebrew barley, or about three-quarters of a manah of water. Thirdly, the *hin* (1·04 gallons) was the Egyptian *hekat* (1·05 gallons). Lastly, the *kor* was equivalent to the Arab *ardeb* very closely (62 to 60 gallons).

If we apply the statement of Josephus to the liquid measure, the *êphah* or *bath* was the cube of the smaller cubit of 13·3 inches, and the *lôg* held a manah of water. The larger measure given by Josephus, and supposed equal to the medimnus or metretes, is 27 Arab *rotls;* the amphora of Rome (5·6 gallons) being 18 *rotls*. It is possible, therefore, that this larger liquid measure is of Greek origin, and that originally the smaller alone was used by the Hebrews. The Greek units were probably taken from Phœnicia or Babylon, and may have been early adopted by the Jews. In the absence of any actual discovery of Hebrew measures of capacity, the question of the larger measures rests mainly on their coincidence with the small cubit, and on the weight of water which would thus be measured by the lôg.

Measures of Weight.

In this respect we are much better informed, as we possess actual Babylonian, Assyrian, and Hebrew weights. Considering also that the measures of capacity vary as the cube of the cubit, and that they are again controlled by the weight of barley and of water, definite conclusions may thus be attained, which check the units both of length and of contents.

At Nippur, in Babylonia, a brown hæmatite weight, recently discovered, is inscribed *X TU Zab KUGI dam-kar*, "Ten shekels

of gold of the merchant." The weight is 1,320 grains Imperial, or a little under 133·3 grains for the shekel, so that the gold was weighed by the light Babylonian shekel. Other weights not inscribed represent the same unit (132 grains), and give 5 shekels, half a shekel, the fifth of a shekel, and smaller divisions of the shekel by 60. This weight is that in use about 1500 B.C. or earlier. In later Assyrian weights a slight degradation of the standard is observable, down to about 700 B.C. The following are actual weights of specimens (*see* "Ninth Report of Warden of Standards in 1875"):-

Nineveh (2 manahs 15,984 grains).	Manah	7,992 grains.
Babylon (duck weight 10 manahs).	„	7,695·7 „
"Two manahs of the country" ..	„	15,371 „
"Two manahs of the king" ..	„	14,902 „
Babylonian talent 959,040 grains..	„	15,984 „
Lion weight Nineveh, 30 manahs. (700 B.C.)	„	7,776·6 „
Lion weight Nineveh, 15 manahs. (700 B.C.)	„	15,364·2 „

The manah was a sixtieth of the talent, and taking the oldest and heaviest examples, we obtain in round numbers:—

Heavy manah, 16,000 grs. Imp. = talent, 960,000 grs. Imp.
Light „ 8,000 „ = „ 480,000 „

There is no evidence that the manah of Babylon was ever divided into other than 60 shekels, whereas the Hebrews (Exod. xxxviii, 25) divided into 50 shekels. Nor is there any evidence that gold and silver were weighed by standards different from each other, or from copper or other things weighed. The whole system of Babylon and Assyria was based on the above units. The Babylonian heavy shekel was thus about 266·6 grains in weight, represented at Nippur by an actual weight of 264 grains. Hence the Hebrew shekel—if the manah was of the same weight —would have been 320 grains.

This deduction is supported by the two independent discoveries of Hebrew weights—one at Samaria marked *reba' Sh-l*, "quarter shekel" of 39·2 grains (for 40 grains), and also marked *reba' neṣeph* (*i.e.*, "quarter half," as explained by M. Clermont-Ganneau), being the quarter of the light shekel of 160 grains;

the other from Tell Zakarîya marked *neṣeph*[1] ("half"), and weighing 154 grains (for 160); both these discoveries agree with the statement of Maimonides (on "Shek." i, 2) that the original Hebrew shekel weighed 320 grains of barley.

Phœnician shekels of the Persian age, however, are found (by Dr. Flinders Petrie) weighing up to 235 grains. These are probably the three-quarter shekel of 240 grains as used at a later period. According to Maimonides after the Captivity the shekel was increased to 384 grains. It then coincided with the tetradrachm of the old system used by Greeks at Ægina, and was also brought into accord with the Persian gold *daric* of 128 grains. The Greeks of Attica, after 600 B.C., adopted a shekel of 266·6 grains from Assyria; and in the second century B.C. the Jewish weights seem to have been brought into accord with this system, adopting a shekel of 222·2 grains (actual coins being 220 and 110 grains), which gave 30 shekels to the Greek manah. None of these facts are therefore irreconcilable. The statement in Ezekiel that in future 25 and 20 and 15 shekels should be the manah (xlv, 12), means apparently that the weight of the shekel was to be doubled. Thus:—

			Shekel.
Heavy shekel 320 × 15 = 4,800 light manah ..			Hebrew.
„ „ 240 × 20 = 4,800 „ „ ..			Phœnician.
„ „ 192 × 25 = 4,800 „ „ ..			Greek.

Maimonides refers to this later manah of 100 to the talent (on Keritoth), as consisting of 100 *dinars*, each of 6 drachmæ, each of 16 grains of barley. This drachma was thus a sixth of that of Ægina (the pondion doubled or 32 Roman *as*), the grain of barley being the Imperial grain.

From the table showing the dimensions and weight of barley it will be seen that a grain 0·33 inch in length weighs an Imperial grain, giving a carat of 3 grains, as against English barley of 1·06 grains Imperial, giving the modern carat of 3·18 grains. Hebrew barley weighed therefore 53 lbs. avoirdupois to the bushel, and 4,000 grains were measured by the *lôg* of 24 cubic inches. The Arab carat of 2·97 grains is derived from the lighter barley of 50 lbs. to the bushel. This gives the old *dhrâ'* of 26·6 inches,

[1] The vowel sounds are, of course, somewhat conjectural, but this does not affect the translation.

and the *dirhem* of 47·7 grains for the half drachma (48 grains), with the *ardeb* of 60 gallons to the Hebrew *kôr* of 62 gallons. The measures of weight capacity and length are thus in exact accord, and agree with actual weights and measures. Comparing the various weights thus ascertained with literary statements, and with existing Greek coins, we find that the new Attic talent (of Solon after 600 B.C.) was to the Babylonian as 5 to 3, or as 800,000 grains to 480,000 grains. The old talent of Ægina and Macedon was the Babylonian, and was as 6 to 5 to the Euboic talent of 400,000 grains. The Roman libra of 5,000 grains multiplied by 80 gave the talent then used in Egypt, which was the later Greek talent of 400,000 grains.[1] Herodotus (iii, 89) gives 70 Euboic minæ to the Babylonian talent. This gives 466.666·6 grains to the talent. The contemporary Persian talent had been even more depreciated from the old Babylonian (to about 460,800 grains); and, as above given, the weights (of about 700 B.C.) give the lighter talent at 479,520 grains, and 462,830 grains by gradual depreciation of the standard. Ælian gives the full weight (72 Greek minæ or 480,000 grains); Pollux (ix. 86) agrees with Herodotus (7,000 Attic drachmæ of 66·6 grains); Plutarch's statement (Solon 15), compared with the extant Greek weights, gives the following:—

	Drachma.		Mina.		Talent.		
Ægina ..	96	×	100	×	50	=	480,000 grains.
Euboic ..	92·6	×	72	×	60	=	400,000 ,,
Attic ..	66·6	×	100	×	60	=	400,000 ,,

The Ægina coins give 96 grains for the drachma, the new Attic give 66·5 grains (as given in Sir C. Warren's paper); but the Ægina talent of 10,000 Attic drachmæ (Pollux ix, 76) must refer to the old Attic drachma (92·6 grains), and represents a degradation of the light talent to 463,000 grains.

The statement of Josephus ("Ant." xiv, 7, 1) that a mina of gold was $2\frac{1}{2}$ *litrae* has been assumed to refer to the Roman libra. It more probably refers to a slightly depreciated Greek mina, giving 16,000 grains for the mina, and 6,400 grains for the litra. The

[1] The bronze lion from Abydos in the Troad weighs nearly 57 lbs. (or 399,000 grains), representing this talent about the beginning of the fifth century B.C. The Aramean text is read, "Verified before the supervisors of Silver" (*see* Taylor, "Alphabet," I, p. 257).

Persian shekel (about 500 B.C.) was 128 to 130 grains (depreciated from the old Babylonian 133·3 grains), and the manah thus 7,680 for 8,000 grains, or double this for the heavier system.

The command in Deuteronomy (xxv, 13, 14) forbids a "great and small" weight or measure. It refers probably to the double system of Babylonia,[1] and perhaps to the double system of dry and liquid measure (*lôg* of 24 and of 32·7 cubic inches); but, if any difference was made in weighing gold and silver, it must have been that gold was weighed by the *neṣeph* or "half" system, and silver by the heavier system; for we find at Nippur gold so weighed. In our own time we use the same weight for both metals, and there is no proof of the existence of separate standards for the metals, if we take into consideration the gradual degradation of the standard in time, and the varying values of silver and gold as compared together.[2]

Measures of Value.

The question of value, rendered easy by the existence of Jewish, Greek, and Roman coins, is on the other hand complicated by the consideration of the comparative fineness of the silver and gold, and of the relative values at different times. Actual coins are not traced before the seventh century B.C.; but about 500 B.C. the gold daric weighed about 128 grains, and was rather less alloyed (by one twenty-fourth) than our sovereign. The silver daric weighed about 86 grains, and the value of gold was about $13\frac{1}{2}$ times that of silver. The debased silver of the East is now reckoned at about 19 to 1 of gold, as against our 15·5 to 1. The old Hebrew and Babylonian proportion seems clearly to have been close on 16 to 1. The silver daric, reduced to this proportion, is equal to the shekel weight of about 100 grains for the drachma. It was called a "shekel," and its then value agrees with the statement of Xenophon that it was equal in value to $7\frac{1}{2}$ Attic oboli, or about $12\frac{3}{4}$ pence.

In the attached tables, for comparative purposes, the value of gold is taken as 16 times that of silver, as representing early silver.

[1] This double system, however, continued late, and according to the Mishnah it appears that the shekel of Galilee was half that of Jerusalem in the second century A.D.

[2] If the weights found at Troy are to be compared with the Babylonian system they represent a manah of 7,992 grains, and are therefore early.

Maimonides (on "Shek." i, 2; v, 6; xi, 4) gives the old shekel as 320 grains, but states that after the Captivity it was increased by a fifth to 384 grains. He probably founded this on Ezekiel (xlv, 12); but the statement is probable, since it makes the Jewish coinage coincide with that of Ægina, and with that of Persia, reduced to silver of the proportion 15 to 1 of gold. The parallel systems are as follows:—

Ægina.		Palestine.		Persia.		Value.	
	gr.		gr.		gr.	*s.*	*d.*
Drachma	96	Zuza ..	96	1 Siklos* ..	96	1	0
Didrachma	192	Ṭib'a ..	192	2 „ ..	192	2	0
Tridrachma.. ..	288	Rigia ..	228	3 „ ..	288	3	0
Tetradrachma ..	384	Sela† ..	384	4 „ ..	384	4	0

The Persian siklos being at the rate of 13⅓ to 1, silver to gold, actually weighed about 86 grains, but the older silver was less pure. The original manah standard of this age had been reduced gradually from 8,000 to 7,680 grains. Hence the old three-quarter of the light Babylonian shekel (100 grains) was made the lowest unit as 96 grains. This system survives in our troy weight, 96 grains being 4 pennyweights (24 × 4).

The Phœnicians appear about this period (judging from weights of about 235 grains actual) to have either preserved the old Hebrew shekel of 320 grains, or to have used the three-quarter shekel of 240 grains as their unit; but within the Persian period they had further reduced their shekel to about 220 grains (or perhaps allowing for loss of weight, 222·2 grains), whereby their coinage became measurable by the Attic system: for 30 shekels

* The *siklos* thus reduced is the tridrachm of the light weight system, with the light manah of 7,680 grains, used in the Persian ages (compare the Babylonian duck-weight 7,695·7 grains to the manah, probably later than the seventh century manah of 7,776·6 grains). The later Phœnician and Jewish manah (one-fifth more than the old Hebrew) contained 100 such tridrachms. The Persian manah contained 80, that is 30 tetradrachms of the heavy system. The manah of 7,680 grains divided by 60 was the daric of 128 grains. The heavy daric was 256 grains (as in extant coins of the so-called double daric). Of this weight, representing a third of *sela*, 15 went to the light gold daric and 30 to the heavy, with silver as 15 to 1 gold.

† If the ratio of the silver of this system was 15 to 1, 5 *sela* went to the daric of 128 grains gold.

thus went to the Attic mina (6,666·6 grains); and this semi-Greek system is that of the Hasmonean silver coins, which actually weigh 220 grains for the shekel, 110 for the half shekel, and 55 for the quarter shekel.

In the Mishnah ("Shekalim") the value of the half shekel (Exodus xxx, 13) is discussed. The priests (*see* Buxtorf, "Lex," s.v. *Rigyâ*[1]) demanded the *tib'a*, the people offered the *zûzâ*, and finally as a compromise the "Shekel of the Sanctuary" was fixed at the *rigyâ* or 228 grains—114 grains for the half shekel. This was represented as early as the second century B.C. by the half shekel of 111·1 grains, due to the slight depreciation of the standard.

The Roman system appears to have been founded on the Babylonian or Attic, not on the western—Phœnician and Hebrew—division of the manah by 50; if we take into consideration the gradual refining of silver. Thus the Babylonian quarter shekel of 66·6 grains is represented by the denarius of 60 grains, the silver being improved from a ratio of 16 to 1 of gold, and giving 25 denarii to the aureus, or about 12 to 1 for silver as compared with gold.

It must be remembered that the coinage of silver only was allowed by the Greeks and Romans to cities, the gold unit being that of the ruling nation. Thus we have no Jewish gold coins, and in the Persian age the gold unit was the daric, as stated by both the Bible (Neh. vii, 70) and Josephus ("Ant." iii, 8, 10). The Jews were allowed by the Seleucidæ to coin silver (1 Macc. xv, 6); and, as we have seen, by a reduction in weight from 228 to 222·2 grains, their coinage was made to coincide with the Greek, while agreeing pretty closely with the required weight for the Temple tribute. For copper the Hasmoneans appear to have retained the old Hebrew and Phœnician unit: for the copper shekel of Simon weighs 156 grains (for 160 grains), and is very commonly found.[2]

As regards "coins of the revolts" nothing need here be said, as probably Renan is correct in regarding those stamped on Roman denarii as forgeries, the genuine examples being of the Hasmonean age.

[1] The preferable spelling is *ragyâ*.

[2] The weight found by R. P. Cré at Jerusalem, which he believes to be a talent, is about 646,615·46 grains, which would give a shekel of 215·5 grains. The inscription is so doubtful that it can not be considered certain that it is Hebrew at all.

Results.

The results which appear to follow from the preceding calculations are:—

1. The Hebrew barleycorn weighed 1 Imperial grain, and was 0·33 inch in length (53 lbs. per bushel).
2. The cubit of 6 palms was therefore 16 inches in length.
3. The Hebrew dry measure was based on a *lôg* of 24 cubic inches, giving 7 *sĕâh* to the cubit of 16 inches.
4. Jewish liquid measure (perhaps of a later period) was based on the smaller cubit of 13·33 inches, the cube being the *bath*.
5. The Hebrew and Babylonian manah was the same, but divided by 60 in Babylonia and by 50 among Hebrews for the shekel; and the Hebrew shekel was consequently 320 grains.
6. Jewish coinage in the second century B.C. was made to agree with the Greek. In the Persian age it agreed with that of Persia, and before the Captivity with that of Assyria, coins, however, not being as yet stamped.

Appendix.

Since the above was written Mr. A. E. Weigall has contributed an interesting paper to the "Proceedings of the Society of Biblical Archæology," December, 1901, pp. 378–395, on weights found in Egypt, which not only confirms what has been said above, but also serves to show that extreme accuracy cannot be attained when a large number of weights are compared. Some of the specimens—scarabs, &c.—may be only ornaments not of exact weight, but out of 100 objects described a fair proportion bear numerals, showing them to be actual weights. They belong to various systems, native Egyptian, Babylonian or Assyrian, Phœnician, Persian, and Greek.

The average weight of specimens of the Egyptian *Kat* unit is 144 grains. This appears to be three-fifths of the old Phœnician shekel of 240 grains. The weights marked as used for weighing gold give an average of 202 grains, representing three-fourths of a Babylonian shekel (200 grains).

As to the foreign weights, the average for the Phœnician shekel is 222 grains, representing the later shekel used about the fifth century B.C., with the lighter talent of 400,000 grains (as at Abydos in the Troad). The heaviest specimen (No. 7,081), weighing 234·8 grains, seems, however, to represent the older unit of 240 grains.

The average weight of the unit supposed to be Assyrian is 126·5 grains. This represents the manah of about 7,600 grains, and indicates a late period, after the conquest of Egypt by Assyria in 680 B.C. There is, however, a specimen (No. 7,002) of a light manah 7,926·5 grains, which is probably much older. Specimens from Tyre (No. 7,047) and from Smyrna (No. 7,049) represent three-fourths of the Babylonian shekel, or 200 grains, as an unit. The Persian siglos of 86 grains, the Ægina drachma of 96 grains, and the Euboic of 92 grains, are also represented, while the mean weight of the Attic drachma is 133 grains.

I.—Comparative Table of Barleycorns.

——	English.	Hebrew.	Arab.
Weight of bushel	56 lbs.	53 lbs.	50 lbs.
Weight of one corn	1·05 grs.	1 gr.	0·99 gr.
Weight of carat (3 corns)	3·18 grs.	3 grs.	2·97 grs.
Cubic bulk of a corn	0·037 in.	0·035 in.	0·032 in.
Length of a corn	0·35 in.	0·33 in.	0·32 in.
Width of a corn	0·117 in.	0·114 in.	0·112 in.
Thickness of a corn	0·095 in.	0·094 in.	0·093 in.
Weight of pint	6,125 grs.	5,800 grs.	5,469 grs.
Weight of lôg	4,426 grs.	4,000 grs.	3,941 grs.
Number of corns in pint (actual) ..	5,342 corns	5,800 corns	6,344 corns
Number of corns in pint (mathematical)	9,121 ,,	9,900 ,,	10,833 ,,
Number of corns in lôg (actual) ..	3,684 ,,	4,000 ,,	5,625 ,,
Number of corns in lôg (Warren) ..	3,653 ,,	3,966 ,,	5,320 ,,

Data.

Weight of distilled water in lôg (24 cubic inches) ..	6,055 grains.
,, ,, ,, pint (34·66 cubic inches) ..	8,744 ,,
,, ,, ,, bushel	80 lbs. avoir.
,, one corn English barley (deduced)	1·05 grains.
,, ,, Hebrew ,, ,, ...	1·00 grain.
,, ,, Arab ,, ,, ...	0·99 ,,

II.—Hebrew Dry Measure.

English.	cubic ins.	grs. barley.	weight. barley.
0·69 pint (lôg)	24	4,000	½ manah.
2·76 pints (cab)	96	16,000	2 manahs.
5 pints (omer)	172·8	12,533	
2 gallons (seah)	576	96,000	12 manahs.
6·2 gallons (ephah)	1,728	288,000	36 manahs.
7·5 bushels (kor)	17,280	2,880,000	6 talents.

III.—Comparative Table of Measures of Capacity.

Dry Measure.

Lôg of corn = ½ manah. Bath or ephah, ¾ cubit of 16 inches cubed.

——	Hebrew.		Egyptian.		Roman.		Arab.		Notes.
	cub. in.	pint.		pint.		pint.		pint.	
Lôg	24 ..	0·69	1 Henu ..	0·8	⅛ Choas ..	0·7	3 Ukich ..	0·63	6 hen's eggs, 24 cubic inches (*see* Peah i, 6).
Cab	96 ..	2·76	3 „ ..	2·4	½ „ ..	2·8	Rotl ..	2·5	
Omer.. ..	172·8..	4·96	6 „ ..	4·8	1 „ ..	5 6	2 Rotls .	5·0	
		gall.		gall.		gall.		gall.	
Hin	288 ..	1·04	1 Hekat ..	1·05	½ Modius ..	0·94	3 „ ..	0·94	The hin is the gallon.
Seah	576 ..	2·08	2 „ ..	2·1	Modius ..	1·88	6 „ ..	1·88	7 seah the 16-inch cubit cubed.
Ephah ..	1,728 ..	6·2	6 „ ..	6·3	Amphora ..	5·6	18 „ ..	5·6	20 Rotls = 6·2 gallons.
Kor	17,280 ..	62·0	3 Khar ..	63·0	½ Culeus ..	56·0	Ardeb ..	60·0	16 dubbeh = 62 gallons.

III.—Comparative Table of Measures of Capacity—(*continued*).

Liquid Measure.

Lôg of water = a manah. Bath or ephah, a cubit of 13·4 inches cubed.

	Hebrew.		Roman.		Attic.	Notes.
	cub. in.	pint.		pint.		
Lôg	32·7..	0·81	Sextarius ..	0·94	Xesta	"Ant." viii, 2, 9; 72 xestæ = 1 bath.
Cab	130·8..	3·24	4 Sextarii ..	3·76	4 Xestæ	48 sextarii = 1 amphora.
Omer	236 ..	6·7	7 Sextarii ..	6·58	7 Cotylæ	"Ant." iii, 6, 6; 7 Attic cotylæ = 1 omer.
		gall.		gall.		
Hin	393 ..	1·4	2 Choas ..	1·39	$\frac{1}{6}$ Medimnos ..	"Ant." iii, 8, 3; 9, 4; 2 Attic choas = 1 hin.
Seah	785 ..	2·9	1½ Modii ..	2·8	$\frac{1}{3}$,, ..	"Ant." ix, 4, 5; 3 modii = 2 seahs.
Ephah	2,353·6..	8·4	Metretes ..	8·4	1 ,, ..	The metretes, 1½ amphoræ of 1,581 cub. ins.
Kor	23,526 ..	84·0	10 Metretes ..	84·0	10 Medimni ..	"Ant." xv, 9, 2; 10 Attic medimni = 1 kor.

Note.—The coffer in the Great Pyramid (72,000 cubic inches) held 3,000 dry measure lôgs, or 1,500 manahs Hebrew barley (25 talents). If the barley weighed 51 lbs. average per bushel it contained 24 talents (4 kor Hebrew measure, 12 khar Egyptian = 4 measures).

The Egyptian cubic cubit of 20·6 inches held 1½ khar.

The Hebrew cubic cubit of 16 inches held 7 sĕâhs (dry measure).

IV.—Comparative Table of Weights.

(1 cubic cubit of 16 inches = 8 manahs, gold.)

	Hebrew.	Babylonian.	Phœnician.		Persian.	Ægintine.	Euboic.	Attic.	Roman.	Arab.
	grains.	grains.	grains.	grains.	grains.	grains.	grains.	grains.	grains.	grains.
Quarter shekel	80	66·6	60	55·5	64	96	92·6	66·6	50	47·7*
Half shekel	160	133·3	120	111·1	128	192	185·2	133·3	100	—
Three-quarter shekel ...	240	200	180	166·6	192	288	277·8	200	150	143†
Shekel	320	266·6	240	222·2	256	384	370·4	266·6	200	—
Manah	8,000	8,000	9,600	6,666·6	7,680	9,600	6,666·6	6,666·6	5,000	9,540‡
Manah	16,000	16,000	—	—	15,360	—	—	—	—	—
Talent	480,000	480,000	—	400,000	460,800	480,000	400,000	—	400,000	—
Talent	960,000	960,000	960,000	—	921,600	—	—	800,000	—	686,000§

* The dirhem. † Quarter okich. ‡ Half oka. § Kantar.

V.—Comparative Table of Values.

(Silver to gold 16 to 1.)

	Hebrew.	Babylonian.	Phœnician.	Persian.	Jewish.	Ægintine.	Euboic.	Attic.	Roman.	Arab.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Quarter shekel ...	0 0 10	0 0 $8\frac{1}{2}$	0 0 $7\frac{1}{2}$	0 0 8	0 0 7	0 1 0	0 0 $11\frac{1}{4}$	0 0 $8\frac{1}{2}$	0 0 $6\frac{1}{2}$	0 0 $5\frac{1}{2}$
Half shekel	0 1 8	0 1 $5\frac{1}{2}$	0 1 3	0 1 4	0 1 2	0 2 0	0 1 $10\frac{1}{2}$	0 1 $5\frac{1}{2}$	—	—
Three-quarter shekel...	0 2 6	0 2 $1\frac{1}{2}$	0 1 $10\frac{1}{2}$	0 2 0	0 1 11	0 3 0	0 2 10	0 2 $1\frac{1}{2}$	—	—
Shekel	0 3 4	0 2 10	0 2 6	0 2 8	0 2 4	0 4 0	0 3 9	0 2 10	—	—
Manah silver	4 3 4	4 3 4	5 0 0	4 0 0	3 8 6	5 0 0	3 8 6	3 8 6	3 2 6	4 19 3
Manah silver	8 6 8	8 6 8	—	8 0 0	—	—	—	—	—	—
Talent	250 0 0	250 0 0	—	247 10 0	—	250 0 0	218 6 4	—	—	—
Talent	500 0 0	500 0 0	500 0 0	495 0 0	—	—	—	436 12 8	—	—
Manah gold	66 13 4	66 13 4	80 0 0	64 0 0	—	80 0 0	55 1 0	55 1 0	41 13 4	79 5 0
Manah gold	133 6 8	133 6 8	100 0 0	128 0 0	—	—	—	—	—	—
Talent gold	4,000 0 0	4,000 0 0	—	3,840 0 0	—	4,000 0 0	3,334 0 0	3,334 0 0	—	—
Talent gold	8,000 0 0	8,000 0 0	8,000 0 0	7,680 0 0	—	—	6,668 0 0	—	—	—
Gold unit	1 0 10	1 0 10	—	1 1 0	—	—	—	0 18 0	1 1 0	0 18 0

REMARKS ON THE JANUARY, 1901, "QUARTERLY STATEMENT."

THE buildings at the Fountain of the Virgin have been examined lately by Mr. Macalister, who points out, in a letter, some errors in Dr. Schick's report in the January *Quarterly Statement*, which were no doubt due to failing health and memory at his great age.

The following corrections should be made:—P. 30, lines 7–9, should read: "The vault here is about 10 feet wide, or rather more than the breadth of the upper stair (the top of which is 8 feet long). The second or lower staircase commences in the middle of the landing, and is 4 to 5 feet wide."

The Buildings, p. 33, lines 8–15. The so-called "masonry facing" not only supports the arch, but does not appear to have rock behind it for at least a distance of 3 feet. The masonry is old, much rougher than that of the arch, and projects beyond the intrados, but it is not necessarily older than the arch itself. The height of the arch is not more than 10 feet above the landing. The ancient incised writing (line 17) proves to be modern Arabic *graffiti*, consisting of short, pious ejaculations. The arch is of one date, not two (line 8 from foot); there is a discontinuity in the masonry of the arch, about the middle of the vault, which is due simply to a settlement, the outer half having slightly dropped. This was probably caused by the foundation of the inner half of the arch (on the north side) being rock and the other half masonry. At the end of the paragraph (p. 34, line 1), for "a stone slab" read "a row of stones": they can be easily stepped over.

It is believed that the course of the new rock-hewn aqueduct is not quite accurately shown on the plan, and that the top of its roof is nearer 9½ feet than 6½ feet below the landing. Dr. Masterman does not consider that the general character of the work in the aqueduct is, as Dr. Schick supposed, very similar to that in the "second aqueduct," as described in the *Quarterly Statement* in the passages indicated in the note (p. 38)[1]. They are, however, not improbably sections of the same aqueduct. Unfortunately, there are no levels of either. On the section (p. 32) for *mosque* read *mastaba*.

[1] *Here, for* "vol. 1886, pp. 92, 97," *read* "vol. 1886, pp. 92, 197."

SENNACHERIB'S CATASTROPHE AT NOB.
(Isaiah x, 28–32.)[1]

By the Rev. W. F. Birch, M.A.

The scene of Sennacherib's disaster has been placed at Pelusium (Herodotus), Libnah and Jerusalem (Josephus). The first two are excluded by the oath in Isaiah xiv, 24, *seq.* :—Pelusium was not in the land of Israel, nor Libnah in the mountains of Judah, but in the Shephēlah. Josephus is very near the truth. The obscurity of Isaiah x, 28–32, has led to the most diverse views : some refer the advance to Sargon, others assign it to the beginning of Sennacherib's invasion, although it obviously belongs to its close, and finally the passage has even been regarded as merely poetical. I observe with pleasure that since 1891 Sargon has become a broken idol, "subduer of Ya-u-da,"[2] not necessarily referring to Judah. Biblical scrutiny reveals the required move against Jerusalem, noted indeed by the LXX, but overlooked in A.V. and R.V. and by writers predisposed to an Egyptian or southern campaign. The prophet is really filling in details of a fact distinctly recorded in 2 Kings, xix, 9, viz., the final march of Sennacherib's host.

The question turns upon the right treatment of שׁוּב, which occurs seven times in 2 Kings, xviii, *seq.* In verse 14 it is rendered *return* from me ; in xix, 8, "*returned and* found" ; so again, 36, "*returned and* dwelt." Now, Hebrew allows *returned and* to be translated simply *again*. In verses 8, 36, however, translators have declined an *again*, but (in 9, "*returned and* sent" have rivetted a misleading *again* upon Sennacherib at Libnah ; his sending *again* to Hezekiah enabling them to send him against Tirhakah. Thus the story was obscured. Happily truth will leak out. It is noteworthy that Delitzsch, on Isaiah xxxvii, 9, observed that the second "heard" appears to have been altered from "returned," yet he slavishly adopted the rendering "[sent] again," though, by rightly placing the disaster near Jerusalem, he was afterwards amazed at the enormous size of Sennacherib's army, if a detachment lost 185,000 men.

It has been too hastily assumed that Isaiah x, 28–32, cannot refer to the end of the campaign, as Libnah lay to the south-west of Jerusalem. But Sennacherib's first object in his operations against Jerusalem was to secure a strong position for his "baggage" at Michmash, and, besides, the route selected was the best available as far as Gibeon. The Peutinger short cut to Jerusalem was not paved in his day.

To sum up, the Bible distinctly states that Sennacherib *returned* from Libnah when he heard of Tirhakah's approach. There may even be a trace of his route in the Talmudic tradition that his army was destroyed

[1] *See* the *Quarterly Statements*, 1891, pp. 314, *seq.*; p. 316, line 24, *for* "west," *read* "east"; p. 317, line 34, *for* "Moab," *read* "(probably) Gilead."

[2] [*Mušakniš mâtu Ya-u-da.*]

in the famous pass of Beth-horon. Isaiah grandly describes the march past Ai to Nob north of and near to Jerusalem. That Sennacherib would make a dash at Jerusalem was likely enough. Ewald observed, "The course of its history would have been totally different had Sennacherib been able to throw himself victoriously into the great fortress at Jerusalem, and there calmly await the attack of Tirhakah. But . . . . he was overtaken by two decisive disasters" (really only one).

In regard to the *cause* of the disaster to Sennacherib's army, whereby 185,000 perished, Vitringa rightly, it seems to me, gathered from Isaiah xxix, 6, and xxx, 30, that it was due to a terrific thunder and hail storm. The havoc inflicted by the storm in Egypt (Exod. ix) and at Beth-horon (Josh. x) shows that it is unnecessary to interpret the language in Isaiah as figurative or poetic. Finally, the *time* of the disaster was doubtless the Passover as stated in Jewish tradition.

NOTICES OF FOREIGN PUBLICATIONS.

Zeitschrift des Deutschen Palaestina-Vereins, vol. xxiv, parts 2 and 3.—The most important paper is a philological study of the dialect spoken by the fellahîn of Central Galilee, by Mr. W. Christie, which has been translated from an English original. The paper contains stories in the dialect which were obtained from Christian, Moslem, and Druse villagers, and a discussion of the grammatical and other peculiarities. The district to which the paper refers is, roughly speaking, bounded on the north by *Wâdy Zerka*, *el-Jish*, and *W. Fâra*, on the south by a line from *Tantûrah* through *el-Hârithîyeh*, Nazareth, *Kefr Kenna*, and *Lâbieh* to Tiberias; on the west by the sea; and on the east by the crest of the heights above the Jordan Valley. The population is about 60,000, and excluding Christians, Moslems, Metâwileh, and Druses, of known descent, there remains a very large residue which speaks only the fellahîn dialect, and is possibly of Canaanite origin.

The other papers are by Professor Dr. Hartmann, on the Arabic inscriptions at Salamya, in Northern Syria, and by Professor Dr. Gautier, on his journey round the Dead Sea, with illustrations from his work, "Autour de la Mer Morte," which was noticed in *Q.S.*, 1901, p. 206.

Mittheilungen und Nachrichten des D.P.V., 1900, Nos. 3–6.—No. 3 contains a paper, with plans and sections, of the Jewish tomb on the road from Jerusalem to 'Anâta, which was discovered in October, 1899, and fully described in the "Revue Biblique" for 1900 (vol. ix, pp. 106–112). The inscriptions on the ossuaries are discussed by E. Kautzsch, some of whose conclusions are criticised by Dalman in No. 6. The publication of the inscriptions collected by Schumacher in and near Jerash is completed. In Nos. 4 and 5 Dr. Schumacher's report on his work in southern 'Ajlûn

is continued, with views of several places which have not been photographed before. The destruction of ruins and inscriptions at Jerash and in its vicinity, which is one of the unfortunate results of the firmer hold upon the country by the Turks, goes on steadily. The fellahîn are pushing forward under the protection of the Government, and the ruins form a convenient quarry for the new houses required. The Circassians are gradually driving the great Bedawî tribe of Beni Hasan eastward, and are introducing a better system of cultivation, and making roads sufficiently good for their carts.

An interesting description is given (No. 5) of the extensive Byzantine and Arab ruins at *Rîḥâb*, which occupy an old Roman site on the borderland between the fertile district of 'Ajlûn and the great Syrian steppe-desert to the east. The position may be compared with that of Boṣrâ in the north, and the town must have been of similar importance as a frontier post. There is no spring, and the water supply depended upon the rainfall collected in large rock-hewn cisterns. Three Greek inscriptions were copied—one with the name of a bishop, Bassos, which has also been found at *Dmêt* 'Edrei'. Professor D. J. Saul describes (Nos. 4, 5) a journey from 'Akaba to Gaza, *viâ Lussân*, *'Ain el-Ḳusime*, and *el-'Aujeh*. Some space is devoted to *'Ain Ḳudeis*, but nothing is added to the description given in "Revue Biblique," 1896, p. 440 ff. No. 6 contains some notes by Dr. Schick, and the usual annual report with short obituary notices of Drs. Kiepert and Socin.

In No. 1, 1901, Dr. Schumacher concludes his report with a description of the high-lying village of *Medwar Nôl*. There are many underground dwelling-places which were once occupied and provided with cisterns and stables. Three forts protected the ancient town, which must have been a place of importance, and is identified with Penuel. After 26 days' excellent work during the intense heat of August, from which all the party suffered severely, Dr. Schumacher reached Ḥaifâ on September 2nd. Dr. Saul's itinerary is concluded, and there are notes by Dr. Schick on the church at *Kubeibeh*, and the museums and libraries at Jerusalem.

Recueil d'Archéologie Orientale, vol. iv, parts 22, 23.—M. Clermont-Ganneau concludes his note on the Phœnician stele from Amrît. Translations of two of the articles, "Betomarsea-Maioumas, and 'the matter of Peor,'" and the "Hebrew mosaic of Kefr Kenna," appeared in the *Quarterly Statement* for last October. An interesting paper discusses worship on roof-tops amongst the Semites, a custom the prevalence of which had already attracted the notice of the author ("Rec." ii, p. 372). He here cites two instances of sacrifices on Assyrian house-tops from "Proceedings S.B.A.," 1901, p. 118 *f.*; of incantations upon a house-top from Epiphanius ("Adv. Hær.," Migne xii, cols. 34, 35), and of a modern Arab sacrifice on the terrace of a house from "Revue Biblique," 1901, p. 595. In another paper important corrections are made in the reading of inscriptions collected by M. Waddington.

In parts 24–26, which complete vol. iv, the discussion of M. Waddington's inscriptions is concluded. There are some additional remarks on the Hebrew mosaic inscription of Kefr Kenna; and papers on two Palmyrene inscriptions copied by Littmann—one containing the name of a little-known Nabatæan god, Shaî' el-Ḳaum, on whose identification M. Clermont-Ganneau has some interesting remarks. The last part contains a table of contents, index, &c.

Revue Biblique, vol. x, part 4, 1901. Two papers by Father Lagrange, on "the inscription of Mesha" (Moabite stone) and on "Ashera and Astarte," are worthy of notice. In epigraphic notes Fathers Jaussen and Vincent give the results of the last excursion of the Dominican school, which has done so much for Palestine epigraphy. The inscriptions are for the most part fragmentary, but even fragments are valuable in Palestine. The Maronite Father Chebli supplies some supplementary notes to Renan's "Mission en Phénicie." But perhaps the most interesting article is the one by Father Jaussen on the Arab tribes in the vicinity of Medeba. The relations between the tribes, their customs on raids, and their home life are well described from information chiefly furnished by the Christian sheikh of Medeba.

Vol. xi, part 1, 1902, contains an interesting study, with plans and illustrations, of the course of the second wall of Josephus, by Father Vincent, who tries to solve the problem by identifying, as portions of the wall, certain fragments of masonry which have, from time to time, been uncovered during building operations in Jerusalem. Father Vincent places the "Gate Gennath" between the Jaffa Gate and the "Tower of David"; and thence carries the wall northward to the Greek Convent of of S. Dimitri; then eastward under the northern part of the Muristân to the close vicinity of the Bazârs; then northward through the Russian property east of the Church of the Holy Sepulchre, which is excluded; and then eastward to the barracks on the site of the Castle of Antonia. Whilst acknowledging the freedom from bias with which Father Vincent writes, and altogether setting aside the question of the site of the Holy Sepulchre, it is impossible to accept his views entirely with regard to the fragments of masonry which he describes. This is specially the case with regard to the walls in the Russian property, which have few, if any, of the characteristics of mural masonry erected for defensive purposes, and are evidently connected with the buildings erected by Constantine. The old stones, which have been re-used, no doubt indicate that the city wall ran near the spot, but the ruins are not those of the second wall. Similar objections might be urged against the proposed identification of other fragments, and there are features in the trace of the wall, as laid down on the plan, which it is difficult to reconcile with certain passages in Josephus. This, however, is not the place to discuss a very difficult question, and it only remains to pay a tribute to the spirit with which it has been treated by Father Vincent.

The paper on the Arab tribes near Medeba is concluded by Father

Jaussen, who gives a list of the tribes, their sub-divisions, and their sheikhs in Arabic, with transliteration, and the number of tents. A useful feature of the paper is a notice of the persons from whom the information was derived.

Father Lagrange contributes notes on Palmyrene and other Semitic inscriptions. Father Vincent supplies drawings and notes on some recently uncovered portions of the Orpheus mosaic (*Q.S.*, 1901, p. 423), and describes newly-found Jewish ossuaries, with Greek inscriptions. There is also a notice of the epigraphic results of a journey in Samaria and round the Sea of Galilee, published in "Echos d'Orient," October, 1901. Milestones, with fragmentary inscriptions, were found at several places on the *Nâblus-Beisân* road; and a group of milestones was discovered on the *Nâblus-Jenîn* road, a few minutes south of *Ḳabâtîyeh*. The latter throws light on the trace of the Roman road from Neapolis to Ptolemais. Busts from tombs at *Beisân* (Bethshean) and other finds are also noticed.

C. W. W.

Ephemeris für Semitische Epigraphik, i, 1, 2, by Mark Lidzbarski (1900–1901).—The *Ephemeris* is devoted to Semitic epigraphy in its widest extent. New inscriptions are recorded and discussed, among them the smaller ones published in the *Quarterly Statements* during the last few years. On palæographical grounds he questions whether the inscribed jar-handles (*see Q.S.*, July, 1900) are older than the eighth century, and whether the stamps from Tell ej-Judeideh are all of the same age. For לב[נה], *loc. cit.*, p. 219, plate 7, No. 6, he reads ש[בני], and for מכא, No. 9, he suggests the restoration תמכא or מיכאל (*i.e.*, Michael). In the Hebrew inscription in Baron Ustinow's collection (April, 1900, p. 114), the unknown הכדן (line 3) is restored to הכהן, "the priest," the designation of R. Youdan.

Theologische Studien und Kritiken, January, 1902.—Lic. Dr. Brose (Dantzig), writing on the pool of Bethesda (pp. 135–140), supports the derivation from בֵּית־אֲשְׁדָא *locus effusionis*. He adopts the view that the pool was fed by one of the channels which carried away, not only the water where the priests washed, but possibly also the blood of the sacrificial victims. The water came from a "holy" place, and might, therefore, be supposed to have healing properties. Popular tradition may have associated the pool with the river in the vision of Ezekiel (ch. xlvii, 8, 9).

In conclusion, mention may be made of an article by Zaccaria on the site of the Prætorium, in the "Nuovo Bollettino Archæologia Cristiana," vi, pp. 151–159.

TRANSLITERATION OF THE HEBREW AND ARABIC CONSONANTS.[1]

א	' or at beginning of word omit.	כ	k (*or* kh).
		ל	l.
ב	b.	מ	m.
ב	b (*or* bh).	נ	n.
ג	g.	ס	s.
ג	g (*or* gh).	ע	‘.
ד	d.	פ	p.
ד	d (*or* dh).	פ	p (*or* ph)
ה	h.	צ	ṣ.
ו	w, v.	ק	ḳ (*or* q).
ז	z.	ר	r.
ח	ḥ (never h).	ש	s (*or* ṡ).
ט	ṭ.	ש	sh (*or* š).
י	y.	ת	t.
כ	k.	ת	t (*or* th).

ا	' or at beginning of word omit.	ص	ṣ.
		ض	ḍ.
ب	b.	ط	ṭ.
ت	t.	ظ	ẓ.
ث	th.	ع	‘.
ج	j (*or* ǵ).	غ	gh (*or* ġ).
ح	ḥ.	ف	f.
خ	kh (*or* ḫ).	ق	ḳ (*or* q).
د	d.	ك	k.
ذ	dh.	ل	l.
ر	r.	م	m.
ز	z.	ن	n.
س	s.	ه	h.
ش	sh (*or* š).	و	w.
		ي	y.

[1] *See* "Notes and News," p. 111. For facility of reference, this table will be reprinted from time to time.—Ed.

THE
PALESTINE EXPLORATION FUND.

NOTES AND NEWS.

The Committee have much pleasure in informing the subscribers to the Fund that Mr. Macalister commenced the exploration of Gezer on June 14th. He has contributed to the present number of the *Quarterly Statement* an interesting account of the history and topography of this ancient site (pp. 227, *et seq.*). From the prominent part it played in pre-Christian times, it is only reasonable to expect that light will be thrown, not only upon the Biblical problems with which Gezer is connected, but also, as Mr. Macalister points out, upon the nature and extent of Mykenæan influence on Palestinian culture, and upon the ethnological affinities of the Philistines and other coast dwellers. It is estimated that the cost of excavation will amount to £100 a month, and the Committee trust that a liberal response may be given to their appeal for financial support.

The *Quarterly Statement* is the only journal in the United Kingdom devoted to the archæology and topography of the Holy Land, and has been the means of making known to its readers at home and abroad, not only the direct results of the Society's researches, but the comments and deductions of scholars in regard to them. It may fairly claim to have contributed not a little to the enormous increase in our knowledge of the Bible which has accrued during the last 40 years.

In furtherance of the same objects, it is now proposed to devote a page or so in each number to "Notes and Queries," and so give opportunity to those who have brief communications to make, or detached questions for elucidation — matters, in fact, for which regular articles would be out of place.

Whilst thus endeavouring to add to the interest and value of the *Quarterly Statement*, the Committee wish to remind its readers that the cost of printing and postage absorbs a considerable proportion of the minimum subscription; and that, in order to pursue those excavations and researches upon which its interest depends, every effort should be made to encourage new subscribers to join, and to place the amount of their subscription above the point which leaves so little for actual work.

There is other work which it is desirable to carry on concurrently with the excavations. There are at present no accurate measurements or special photographs that can be used in any discussion respecting the origin of the people of Palestine. These data have long been desired, and everyone will be glad to hear that arrangements have recently been made for the gradual collection of measurements and photographs of typical men and women of the various races and tribes in the country.

Another branch of the work, for which funds are much needed, is the improvement and extension of the meteorological observations that have been carried out by the Fund for so many years, by substituting self-recording instruments for those now in use, and by establishing additional stations, especially in the Jordan Valley.

The observations on the fluctuations in the surface level of the Dead Sea, undertaken for the Fund by Dr. Masterman, show that a re-examination of the water and bed of the lake with the improved instruments of the present day is much to be desired.

There are also several phenomena, such as the "white line" on the surface of the lake, movements of the water similar to the "seiches" of the Lake of Geneva, sub-aqueous springs, currents, and the presence of patches of mineral oil on the surface of the water, which demand *scientific* examination.

Dr. Bliss writes from Beirût, May 27th, 1902:—On reading in the April *Q.S.* (pp. 170–175) the article entitled "The Germans at Ba'albek," copied by permission from *The Builder* of January 11th, 1902, I was surprised to note that the large altar excavated in the centre of the great court is described as rock-hewn, with the inequalities in the surface rectified by the addition of

blocks of masonry. I have seen this altar several times, and have noted not only that it is composed entirely of masonry, but that no rock appears under it. However, preferring not to set the statement of one visitor over against that of another, I referred the matter to the officer at present in charge of the excavations. In reply, he states that the altar consists entirely of masonry, resting on a built foundation, under which no rock has been found. These facts invalidate the theorising of the writer in *The Builder* relative to the supposed condition of the site in pre-historic times. In fact, the excavations have thus far revealed no remains ante-dating the Roman period.

The Rev. J. E. Hanauer writes from Jerusalem, April 12th, 1902 :—"I find that, through some inadvertence on my part 21 years ago, I gave a wrong reference in my second letter on 'The Place of Stoning' (*Q.S.*, 1881, p. 319), and mentioned the German translation of Rabbinowicz's French work instead of the German version of S. Munk's French work. I can only account for the blunder by the fact that I had not the said works of reference at hand, and writing from memory mentioned the wrong one. Would you favour me by allowing the following correction to appear in your next issue :—Instead of 'ein Gerüst'—Rabbinowicz, *Einleitung*, &c., &c., read 'einem Brettergerüst,' Levy's German version of S. Munk's *Palestine*, vol. ii, p. 437 text, and footnote 1."

The following is the original French of the passage alluded to by Mr. Hanauer :—"Selon la loi traditionelle (*Mischnah*, 4me partie, *Synhedrin*, ch. 4, § 4), on lançait le patient du haut d'un échafaud élevé de deux hauteurs d'homme, et puis on l'accueillait de pierres" (*Palestine*, par S. Munk, Paris, 1856, p. 214*b*, note 1).

Mr. Hanauer remarks also that the representation of the two monkeys upon the piece of mediæval sculpture from Jaffa, which is figured by Prof. Clermont-Ganneau in his *Archæological Researches*, vol. ii, p. 158, is not unlike a piece of sculpture in the Church of the Sepulchre. One is not surprised to hear that a curious fable is associated with it, and we hope to be able to give some account of the story in an early number.

Mr. Macalister writes from Jerusalem that he recently visited Solomon's quarries in company with Mr. Hornstein, in order to

ascertain the truth of two local reports about them: first that there is a deflection of the compass inside the cave, and second that there is an unexplored passage of great length proceeding from a certain part of it. "We tested the compass in every possible way, and found that there is no variation whatever, and also were quite convinced that the alleged passage is equally apochryphal. Mr. Hornstein had a number of his boys with him from the school, who searched in all directions. We spent a long time in the thorough exploration of the cave, and found nothing new. Consequently, if anyone writes to the Fund on either of these points, it will be possible to give an authoritative negative to both of them."

Mr. Macalister also informs us that there can be no doubt respecting the reading of the name HANNO on the jar-handle referred to in the last number of the *Q.S.*, p. 121. As he further points out, the cut on p. 120 is reversed, and on the last line but one of the same page, "ruined churches" should of course be read.

We regret to hear that Herr Sandel, who drew plans for Dr. Bliss, during the excavations at Jerusalem, before Mr. Dickie was appointed, died suddenly on May 31st at Jerusalem.

From the Hebrew weekly paper, *Hashkaphah*, published at Jerusalem, it appears that a new hospital, built and maintained by Dutch and German Jews, and said to be the finest Jewish building in the Holy City, was opened in January last.

In consequence of the great success of the Rothschild school for girls, and the growing demand for education, the Jewish authorities have decided to change their previous policy, and open a school of their own for girls.

According to *Home Words for Jerusalem*, the transfer of the Jewish colonies in Palestine from Baron Edmond de Rothschild to the Jewish Colonisation Association seems to have led to a certain amount of pessimistic feeling amongst the colonists, for which there is no apparent reason.

From the *Revue Biblique*, 1902, p. 281, we learn that at the request of the Greek patriarch of Jerusalem, MM. Hartmann and

Cornély have made a full size copy, in oils, of the great mosaic map of Palestine, Egypt, &c., at Medeba. The copy, which is said to be very satisfactory, is now at the new Greek school of S. Dimitri at Jerusalem, and is accessible to visitors.

The Museum and Library of the Palestine Exploration Fund at Jerusalem have been removed from the room opposite to the Tower of David to the Bishop's Buildings, near the Tombs of the Kings, where the use of a room has been kindly permitted by the Rev. Dr. Blyth, Bishop in Jerusalem and the East. The Museum is open daily, except Sundays, and the Honorary Secretary, Dr. D'Erf Wheeler, will give all information necessary.

The "Flora of Syria, Palestine, and Sinai," by the Rev. George E. Post, M.D., Beirût, Syria, containing descriptions of all the Phaenogams and Acrogens of the region, and illustrated by 441 woodcuts, may be had at the office of the Fund, price 21*s.*

In order to make up complete sets of the "Quarterly Statement," the Committee will be very glad to receive any of the back numbers.

The income of the Society from March 25th to June 23rd, 1902, was—from Annual Subscriptions and Donations, including Local Societies, £216 12*s.* 3*d.*; from Lectures, £2 12*s.* 6*d.*; from sales of publications, &c., £91 0*s.* 4*d.*; total, £310 5*s.* 1*d.* The expenditure during the same period was £423 4*s.* 9*d.* On June 23rd the balance in the Bank was £292 2*s.* 11*d.*

Subscribers in U.S.A. to the work of the Fund will please note that they can procure copies of any of the publications from the Rev. Professor Theo. F. Wright, Honorary General Secretary to the Fund, 42 Quincy Street, Cambridge, Mass.

The Committee will be glad to communicate with ladies and gentlemen willing to help the Fund as Honorary Secretaries. Mrs. F. C. Burkitt has kindly consented to act for Cambridge; E. Ransom, Esq., 24, Ashburnham Road, for Bedford; the Rev. W. Ewing for Stirling, N.B.; the Rev. Canon Gell for Tewkesbury; and the Rev. R. Tapson for Weston-super-Mare, in place of the Rev. Henry George Tomkins, resigned.

The price of a complete set of the translations published by the Palestine Pilgrims' Text Society, in 13 volumes, with general index, bound in cloth, is £10 10*s*. A catalogue describing the contents of each volume can be had on application to the Secretary, 38 Conduit Street.

The Museum at the office of the Fund, 38 Conduit Street (a few doors from Bond Street), is open to visitors every week-day from 10 o'clock till 5, except Saturdays, when it is closed at 2 p.m.

It may be well to mention that plans and photographs alluded to in the reports from Jerusalem and elsewhere cannot all be published, but all are preserved in the office of the Fund, where they may be seen by subscribers.

Photographs of the late Dr. Schick's models (1) of the Temple of Solomon, (2) of the Herodian Temple, (3) of the Haram Area during the Christian occupation of Jerusalem, and (4) of the Haram Area as it is at present, have been received at the office of the Fund. Sets of these photographs, with an explanation by Dr. Schick, can be purchased by applying to the Secretary, 38 Conduit Street, W.

Branch Associations of the Bible Society, all Sunday Schools within the Sunday School Institute, the Sunday School Union, and the Wesleyan Sunday School Institute, will please observe that by a special Resolution of the Committee they will henceforth be treated as subscribers and be allowed to purchase the books and maps (by application only to the Secretary) at reduced price.

The Committee will be glad to receive donations of Books to the Library of the Fund, which already contains many works of great value relating to Palestine and other Bible Lands. A catalogue of Books in the Library will be found in the July *Quarterly Statement*, 1893.

The Committee acknowledge with thanks the following :—

"Recueil d'Archéologie Orientale." Tome V, Livraisons 1–5. *Sommaire* :—§ 1. La stèle phénicienne d'Oumm el-'Aouâmid (pl. I–II). § 2. Dannaba et le pays de Job. § 3. Zeus-Helios et le Baal-Bosor. § 4. Sur quelques inscriptions grecques du Haurân. § 5. Sur quelques noms de lieux de Palestine et de Syrie dans les listes épiscopales de Michel le Syrien. § 6. Légendes romaïnes et arabes inscrites sur des lampes en terre cuite. § 7. Dédicace phénicienne à Echmoun provenant de Sidon. § 8. Nouveaux bustes funéraires avec inscriptions palmyréniennes. § 9. L'inscription en mosaïque de Beît Sourîk (pl. III). § 10. Antiquités et inscriptions puniques. § 11. Le Castellum romain de Qariat el-'Enab. § 12. Plaque d'or représentant Esculape, Hygie et Télesphore (pl. III). § 13. Un dépôt de flèches

anciennes dans la forteresse de David à Jérusalem. § 14. Le plâtrier Sosibios de Gaza. § 15. Inscription bilingue nabatéo-grecque du Sinaï. § 16. La hiérarchie sacerdotale à Carthage. § 17. Les possessions de l'abbaye du "Templum Domini" en Terre-Sainte au XII^e siècle. § 18. Le Dieu Mifsenus. From the Author, M. Clermont-Ganneau.

"Deux Questions d'Archéologie Palestinienne":—I. L'Église d'Amwâs l'Emmaüs-Nicopolis. II. L'Église de Qoubeibeh l'Emmaüs de S. Luc. From the Author, P. Barnabé, d'Alsace O.F.M., Missionnaire Apostolique.

"The Holy City, Athens, and Egypt." By Sir William Thomas Charley, Knt., K.C., D.C.L. From the Author.

"Primitive Semitic Religion To-day." From the Author, Professor Samuel Ives Curtiss, Chicago Theological Seminary.

"Al-Mashrik: Revue Catholique Orientale Bimensuelle." Among the more important contents are:—"Geographical and Ethnological Notes on Lebanon," by Father Lammens; "The testimony of Arabic Authors with reference to Holy Places," by Dom J. Marta; "The Ancient Convents of Lebanon," by Father I. Harfouch.

For list of authorised lecturers and their subjects, write to the Secretary.

Form of Bequest to the Palestine Exploration Fund.

I give to the Palestine Exploration Fund, London, the sum of_____ to be applied towards the General Work of the Fund; and I direct that the said sum be paid, free of Legacy Duty, and that the Receipt of the Treasurer of the Palestine Exploration Fund shall be a sufficient discharge to my Executors.

*Signature*_____

Witnesses _____
_____
_____

Note.—*Three Witnesses are necessary in the United States of America; Two suffice in Great Britain.*

Whilst desiring to give publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

ANNUAL MEETING.

The Annual General Meeting of the above Fund was held on Tuesday, June 17th, 1902, at the Royal Institution, Albemarle Street. Lord Eustace Cecil occupied the chair, and an address on the recent and proposed excavations in connection with the Fund, illustrated by lantern slides, was given by Major-General Sir Charles W. Wilson, K.C.B., F.R.S., R.E., &c.

In opening the proceedings the Chairman called upon Colonel Watson to read the Annual Report.

Colonel Watson read the Report, which was as follows:—

My Lord, Ladies, and Gentlemen,

In resigning the office to which they were elected at the last Annual Meeting, your Executive Committee have the honour to present the following Report:—

Nineteen meetings have been held for the transaction of business.

It is with much satisfaction that the Committee are able to announce that the local difficulties, which at one time threatened to seriously interfere with the active prosecution of the exploratory work of the Fund under the present Irâdeh, have at last been overcome, and that Mr. Macalister is now at work on the mound that covers the ruins of Gezer. For this happy result the Fund is indebted to the good will of His Excellency the Governor of Jerusalem, to the support of the Embassy at Constantinople, and, more especially, to the ready sympathy and exertions of His Majesty's Consul and Acting Consul at Jerusalem.

During the long period of waiting, Mr. Macalister has been actively engaged upon minor researches in and near Jerusalem, and on a visit to Beersheba, where the building operations of the Turks, on permanently occupying the place, had led to the discovery of the remains of a Byzantine town. The results of these investigations are now being published in the *Quarterly Statement*. Several interesting papers have already appeared, and others will be found in the July number, including a discussion by Professor Clermont-Ganneau of an important Greek inscription copied by Mr. Macalister at Beersheba.

Amongst the more interesting discoveries at Jerusalem have been an aqueduct, partly of very ancient date, which at one time carried the water of the Virgin's Fountain down the valley of the Kidron; the orifice in the rock from which the water issues; and new tombs and ossuaries. In Palestine may be noticed the stele of Seti I, Pharaoh of Egypt, found by Prof. G. Adam Smith at Tell esh-Shihâb, east of Jordan; the Phœnician stele found at Umm el-'Awâmid; and several inscriptions of importance.

The German excavations at Ba'albek, and those of the Austrians at Tell Ta'anuk (Taanach), have been fruitful of results, but only some of the general features of the discoveries have yet been made public. Excavations have been commenced by the German Palestine Society at Tell Mutsellim, believed by many authorities to be the site of Megiddo; and it is believed that the Berlin Academy intends to excavate at Jerash, or some other Græco-Roman town east of Jordan. The American School for Oriental Study at Jerusalem has also been at work, and an effort is now being made in the United States to raise funds for the excavation of an important site in Western Palestine.

These enterprises, which further the objects for which the Fund was created, are being well supported in the countries that have undertaken them, and in wishing them every success the Committee express the hope that the liberality of the subscribers to the Fund will enable Mr. Macalister to make that thorough examination of the ruins of Gezer from which so much is expected.

Financial support is also required for other classes of investigation. One result of the interesting observations on the fluctuations of the surface level of the Dead Sea, which have been made for the Fund by Dr. Masterman, has been to show that a thorough examination of that lake, and of the meteorological conditions in the southern portion of the Jordan Valley, with the more perfect instruments of the present day, is very desirable. On this subject the Committee hope to obtain the advice and assistance of Professor Libbey, of Princeton University, New Jersey, who has recently returned from a lengthened journey in Palestine, which has thrown new light on many questions connected with the physical geography of the Holy Land.

The Memoir, containing full details of the excavations carried out by Dr. Bliss and Mr. Macalister, under the late Irâdeh, will be

published shortly, in large quarto, so as to range with the other volumes of the Survey Memoirs. It contains 103 full-sized plates, 92 illustrations, and a valuable chapter on the imprecation tablets, with transcriptions of the inscriptions, by Professor Dr. Wünsch, to whom the Committee are much indebted.

The Committee are glad to be able to state that their late Chairman, Mr. James Glaisher, though in his 94th year, and unable to attend the meetings of the Committee, has improved in health, and still continues to supply those valuable papers on the meteorology of the country, which have so greatly added to our knowledge of that subject.

The Committee are greatly indebted to Dr. Torrance and Dr. Masterman for the trouble they have taken in observing the fluctuations of surface-level in the sea of Galilee and the Dead Sea; and to the following gentlemen for the papers they have contributed to the *Quarterly Statement*:—

To Dr. Bliss for his account of the German excavations at Ba'albek, and to the editor of *The Builder* for permission to reproduce an illustrated article on the same subject from that paper.

To Colonel Conder for his paper on "Hebrew Weights and Measures."

To the Rev. James Nies for his "Notes on a Cross Jordan Trip."

To Prof. George Adam Smith for the interesting record of his journey from Tiberias through the Hauran to Damascus.

To our Chairman, Sir Charles Wilson, for his papers on Golgotha.

Prof. Clermont-Ganneau continues his series of Archæological and Epigraphic Notes:—8. Betomarsea-Maioumas, and "the Matter of Peor." 9. The Hebrew Mosaic at Kefr Kenna. 10. Dannaba and Job's Country. 11. Zeus-Helios and Baal-Bosor. 12. Some Greek Inscriptions in the Hauran. 13. Fresh remarks on the Hebrew Mosaic of Kefr Kenna. 14. Baal-Bosor or Baalkosor. 15. The Repository of Ancient Arrows in the Castle of David. 16. The Plasterer Sosibios of Gaza.

The following papers by Mr. Macalister have been published:—On certain Antiquities in the neighbourhood of Beit Jibrîn; The Birak esh-Shinanîr; A note on West Palestinian Dolmens; Addenda to the List of Rhodian Stamped Jar-handles from Tell Sandahannah; The Nicophorieh Tomb; A newly-discovered Tomb

North of Jerusalem; Inscription from the Wâdy Samâr; The Ancient Necropolis at Kerm esh-Sheikh; Further Jar-handles with Rhodian Stamps; The "Egyptian Tomb" at Silwân; The Mosaic in the Church of Notre Dame de Spasme, Jerusalem; The Sculptured Cave at Sarîs; The Hill over Jeremiah's Grotto.

Your Committee have also to record their thanks to many scholars and investigators who have sent to the *Quarterly Statement* notes and articles of much interest.

No new publication has been issued by the Fund since the Annual Meeting in July last; but we are pleased to announce that the Director-General of the Ordnance Survey, with the authority of the Board of Agriculture, has kindly transferred the moulds and casts of the models of Sinai and Jerusalem to the Fund. As soon as arrangements can be made, copies of these models will be offered to museums, universities, colleges, schools, &c., at a reduced rate.

The large Relief Map of Palestine has had a very gratifying reception. Copies have been sent to nearly every country in the world, and in consequence of the wish frequently expressed by subscribers and others, our Acting Secretary, Mr. George Armstrong, has been engaged during his spare time for the last two and a half years in preparing a similar map on about half the scale of the large one. This is now completed, and casts in fibrous plaster are being prepared. It is constructed on exactly the same basis as the large model, and will be fully coloured and framed, and issued at a moderate price. The original, with a partly-coloured copy, is now on view at the office of the Fund, in Conduit Street.

Since the last Annual Meeting 75 names have been added to the list of subscribers, and 86 have been struck off through death and other causes.

Our warmest thanks are again due to our honorary local secretaries for their willing help in collecting and forwarding subscriptions to the office of the Fund; and especially to our Honorary General Secretary in America, Dr. Theodore Wright, and to the subscribers in the United States, who have given such liberal support to our work.

The Committee regret to record the loss by death of the following members of the General Committee—viz., the Marquis of

Dufferin and Ava, K.P.; Dr. Wescott, the late Bishop of Durham; Sir Richard Temple, Dr. Conrad Schick, and Mr. T. Rymer.

The reports of Dr. Schick will be much missed, he was long resident in Jerusalem, and was always on the alert for any new discovery that would add to our knowledge of underground Jerusalem. His last reports were discoveries at the "Virgin's Fountain," and "the Muristan, or the Site of the Hospital of St. John at Jerusalem," and the "Hill over Jeremiah's Grotto."

The following is the Treasurer's Statement, which was published with the Balance Sheet in the April number of the *Quarterly Statement*:—

TREASURER'S STATEMENT.

During the year 1901 the receipts from all sources amounted to £1,936 14*s.* 9*d.*, which is recorded under the following headings:—

	£	*s.*	*d.*
From Donations and Subscriptions	1,464	1	3
„ Lectures	10	5	4
„ Sales of Publications	462	8	2

At the close of 1900 the balance in the Bank, which included £10 8*s.* 0*d.* for subscriptions paid in advance, was £291 7*s.* 11*d.*, making the total available £2,228 2*s.* 8*d.*

It is to be regretted that the receipts for the year have been seriously diminished, probably by the causes which have affected so many societies.

The Donations and Subscriptions vary in amount. The highest being £20; the lowest, 5*s.*

The amount received for Lectures came from America. The sales from publications are made up from Maps, £150 8*s.* 4*d.*; from Books, £274 3*s.* 4*d.*; from Photographs, Casts, and Lantern Slides, £37 16*s.* 6*d.*

The expenditure during the same period was—on Exploration, £448 4*s.* 3*d.*

On printing and binding, including the *Quarterly Statement*, £393 5*s.* 9½*d.* The expenditure under this heading is mainly on the production of the Journal itself, which is issued free to all subscribers of half a guinea and upwards.

On maps, lithographs, illustrations, photographs, casts, and lantern slides, the total under these headings amounting to £170 19*s.* 9½*d.*

On advertising, insurance, stationery, and sundries, £59 11*s.* 11*d.*

The postage on the *Quarterly Statement*, and on all book and map packets sent out, amounted to £121 17*s.* 2*d.*—£70 3*s.* 6*d.* of this sum being incurred for the postage of the Journal.

On the management, which includes salaries, wages, rent of office and museum, light and coals, £619 5*s.* 2*d.*

The liabilities at the end of 1900 were reduced by £250.

The balance in the Bank on December 31st, 1901, was £164 8*s.* 7*d.*

Assets.	£	s.	d.	Liabilities.	£	s.	d.
Balance in Bank, December 31st, 1901.. ..	164	18	7	Printers' Bills and Current Expenses	427	5	11
Subscriptions in arrear..	349	11	0				
Also the stock of Publications in hand, Surveying Instruments, Show Cases, Furniture, &c.							
The valuable library and unique collection of antiques, models, &c.							

The amount received through our Hon. General Secretary, Professor Theodore F. Wright, from America, was from—

	£	s.	d.
Subscriptions	205	15	6
Lectures	10	5	4
Sales	27	13	7
Total	£243	14	5

Walter Morrison, *Treasurer.*

The Chairman.—Ladies and gentlemen,—In moving the adoption of the Report which you have just heard, and which tells you so much of what the Society has done during the past year, I feel that my task is more or less made easy. But I think it is only right that I should call attention to the great losses that we have sustained by the death of some of our illustrious members. I mean notably those names that have already been read out to you, that of Lord Dufferin, whom I may claim as a personal friend of my own, of Dr. Westcott, Bishop of Durham, and Sir Richard Temple, all learned in the law of the East, and all brought up in the wisdom of the West. Of Dr. Conrad Schick I had no personal knowledge, but I knew that he was a most indefatigable member of this Society, one who was extremely learned, and who did his work in a most marvellous manner, and whose loss we must all very sincerely regret, as well as that of Mr. T. Rymer, and others. The Report has told you that we have lost a certain proportion of subscribers during the last year, as many as 86, and that there is a slight falling off—only a slight falling off, and I trust only temporarily—in the

number of new subscribers who have joined us; and I look forward, now that peace is happily re-established, hoping that our attention will be more turned to scientific subjects, especially to the work upon which this Society is engaged. Considering what has been done in the past, I think we may look forward to a better report in the future, and to enlisting more and more subscribers to help carry out the great work which for 36 years we have been engaged in. The record of work, I think you will agree with me after listening to the Report, has been a very good one. You have just heard that many of the excavations in and around Jerusalem have been fruitful, and that an ancient aqueduct has been discovered which conducted the waters of the Fountain of the Virgin down the Kidron Valley, and that other discoveries have also been made. But the one point which I think the Report lays great stress upon, and upon which you will, no doubt, hear a very interesting account from the worthy Chairman of the Executive Committee, who sits at my right hand, is with regard to the excavation of the ruins of Gezer, a well-known town in Philistia, as those who are familiar with the Bible will recollect. I will not enlarge upon that subject, because I know that Sir Charles Wilson will touch upon that and other subjects also contained in this Report; but I cannot forget that all our thanks are due to the discoverers of these monuments for the great work they have helped to do, and especially I ought to mention the name of Mr. Macalister, who has rendered great service, and who is as clever, I believe, with the pick-axe and shovel as he is with his pen. I have had the advantage of reading many of his works, I am afraid not thoroughly, but of looking at some of the works of which he is the author, and of which there is a long list in the Report before me. They are all most interesting, and all show what a worthy and efficient servant we have had to help us in the great work this Society undertakes. I ought also to mention the names of Dr. Masterman, Dr. Torrance, and others, for no doubt all, small and great, have helped us, particularly in the physical geography of Palestine, and with regard to the Dead Sea. I speak now as one who has not seen the Holy Land for a matter of 30 years or more, and I have no doubt I should find a great many things changed, and perhaps not all for the better, if I went there. I am afraid I should not very much approve of the railway between Joppa and Jerusalem, but, then, I am an old Conservative, and rather prejudiced in the matter.

Anyway, there is one thing mentioned in the Report which I should disapprove of, and that is the rapid manner in which all the excavations out there and all the antiquities are being more or less disturbed and interfered with, sometimes for reasons of profit, by the natives and others. I think that is a very serious matter, and I am afraid it is not only the case in Palestine, but in Egypt and elsewhere, as the railway, by giving greater facilities, enables people to get there much more readily than they did in former times. I most cordially agree with the paragraph which says that our warmest thanks are again due to our honorary local Secretaries, especially to our honorary General Secretary, Dr. Theodore Wright, and to subscribers in the United States of America. I wish to lay particular stress upon that, because I believe that America in the past, as in the present, and as I hope in the future, has always been most liberal to this Society, and a great deal of our success is due to our cousins on the other side of the Atlantic. I think it only right to do so, and I am very glad to be able to endorse what is said in the Report. I do not think I ought to detain you any longer, because I know you are going to listen to a very interesting statement from the Chairman of the Executive Committee. I will now ask Dr. Rogers to be good enough to second the motion that this Report be received and adopted.

Dr. Rogers.—Mr. Chairman, ladies, and gentlemen,—I have very great pleasure indeed in seconding the resolution that has been proposed. There are some things which may profitably be postponed, but the exploration of Palestine is not one of those things. We have to prosecute that and with vigour, and the time is emphatically *now*. We have the good fortune to have secured a number of able archæological experts; we have at last obtained a firman, and what renders the matter still more pressing is that grave-robbers and riflers are at work, and if you wish to obtain as much information as possible of the past, and transmit it to posterity, we must be up and doing now. Therefore there is a special call at this time, more than any that I can remember, to increase the funds of the Society, and if those who have been good enough to attend here to-day will try and circulate this idea amongst their friends it may help us. I notice that while we are honoured with the presence of many young ladies, most of the men

present are like myself—well, no longer what we were 36 years ago. Most of us joined the fund as young men, and I have seen most of these faces from time to time, not in this room, but in others. Now, I should like to see a number of young men who will carry on the work after we have passed away. There are a few, but very few, in the present assembly, perhaps the ladies will endeavour to secure a few of these. I should be very glad if this meeting should be the means of supplementing the deficiency in the Fund, and restoring the losses that we have sustained by the death of so many friends during the past year. I have very great pleasure in seconding the resolution.

The resolution was carried unanimously.

The CHAIRMAN.—I will now ask Sir Charles Wilson to be good enough to give us his Address, which I know will be most interesting.

Sir CHARLES WILSON.—The work of the Fund under the last Irâdeh was the excavation of certain mounds in the Shephelah or low country of Judah. An examination of these mounds would, it was thought, add to our knowledge of the race or races living in the district during the Israelite and pre-Israelite periods, and at the same time throw light on the sites of Gath, and other places not yet identified. A full account of the work so well carried out by Dr. Bliss and Mr. Macalister is given in the forthcoming *Memoir*, which is illustrated with reproductions of Mr. Macalister's beautiful and accurate drawings. It is only possible on this occasion to give a brief summary of the results that have been obtained.

Tell Zakariya, the first site attacked, rises above the Vale of Elah, and from its summit there is a striking view of the battle-field upon which David slew Goliath. Here the excavations disclosed the existence of a town, founded in the late pre-Israelite period, which commences about 1500 B.C., fortified in Jewish times, possibly by Rehoboam, occupied during the Seleucid period, and deserted after a brief Roman and Byzantine occupation. No clue was obtained to the name of the town, but Dr. Bliss suggests that it may have been Azekah or Socoh.

Tell es-Ṣâfi, supposed by many authorities to be the site of Gath, stands at the mouth of the Vale of Elah, as a natural fortress between the Shephelah and the Plain of Philistia. Here, unfortunately, the space available for excavation was small, for most

of the summit of the tell is occupied by a village and large cemeteries. The excavations showed that the site was occupied in the early pre-Israelite period, certainly as far back as the 17th century B.C., and that the occupation was continuous down to Seleucid times. Then, apparently, the place was abandoned until the arrival of the Crusaders, who, in 1144, built upon it the important fortress of Blanche Garde. Perhaps the most interesting discovery was that of three upright monoliths, with the remains of enclosing walls, which evidently formed one of those "high places" so frequently mentioned in the Bible. The town walls appear to date from the Jewish period, probably from the reign of Rehoboam. In the *débris* of the Jewish town were found jar-handles with royal stamps; early Greek ware (700–550 B.C.), and a few specimens of Greek black and red-figured ware (550–350 B.C.). Nothing was discovered which directly identified the place with Gath, but its history, as disclosed by the excavations, certainly favours the identification. The tell is easily accessible from the maritime plain, and it is interesting to compare the abundant evidence of the influence of Ægean or Mykenæan, and of later Greek civilisation found in it with the slight traces of either found at Tell Zakarîya, a few miles eastward, near the foot of the hill country of Judah.

At *Tell ej-Judeideh*, the next site, which lies south of Tell Zakarîya, the excavations disclosed the existence of a town founded in the early pre-Israelite period, abandoned long before the Hebrew conquest, reoccupied during the Jewish monarchy, and apparently fortified in Roman times. In the centre of the mound a Roman villa was found. No clue was obtained to the name of the place, which naturally would not appear in the lists of Joshua, since the site was deserted before the Israelites crossed the Jordan.

The excavations at *Tell Sandahannah*, about one mile south of Beit Jibrîn, were of exceptional interest. They proved the existence of a walled Seleucid town, built on the ruins of a Jewish town, which was almost certainly the Biblical Mareshah. The name, in the form Khurbet Mer'ash, still clings to a small suburb about three-quarter mile distant. In Seleucid and early Roman times Mareshah played an important part. It was plundered by Judas Maccabæus, taken by John Hyrcanus, restored to the Idumæans by Pompey, and finally destroyed by the Parthians

in B.C. 40. The finds in pottery were unusally rich and valuable for the illustration of the Seleucid period. Here were found three Greek inscriptions of the same period. One is on the base of a statue of a Ptolemaic Queen, Arsinoë, whom M. Clermont-Ganneau identifies with the lady who was sister and wife of Ptolemy IV, and who played an important part at the battle of Raphia, in which Antiochus the Great was defeated; another bears part of the name Berenike, possibly the mother of Ptolemy IV; and the third, on part of the base of a colossal statue of an eagle, has been ingeniously restored by M. Clermont-Ganneau as—Skopa]s, son of Kraton, to Apollo [addresses his] prayer.

Near the south-west corner of the town some 50 fragments of very soft limestone, covered with inscriptions, were found. The cleansing and casting of these tablets, which were very lightly engraved, was, from the friable nature of the material, a task of much delicacy and difficulty. But it was successfully carried out by Dr. Bliss, and Professor Dr. Wünsch, of Breslau, has contributed an interesting chapter on the inscriptions to the *Memoir*. Four of the tablets are inscribed with Hebrew words, and two cannot be deciphered. The remaining inscriptions are in Greek, which shows a state of transition from capital letters to a more cursive method of writing; their date is later than the third century B.C., and earlier than the fourth century A.D.

The Greek inscriptions are all connected with ancient imprecatory rites. Conspicuous amongst them is the "prayer which was believed to *fetter* the object of imprecation—*i.e.*, to lame him or kill him outright." In one case a man, who had been reduced to helplessness by an imprecation, beseeches the god to deprive his enemy of speech and the enjoyments of love. In another a man's marriage is cursed, and in two instances a bridegroom, possibly by a disappointed lover. In all cases of imprecation the choice of material was considered important. In Greece lead, the deadly metal, was used; in Egypt, the "sacred paper"; and in Palestine, apparently, limestone had some significance. In this connection Dr. Wünsch cites the "white stone," inscribed with "a new name," which was to be given "to him that overcometh" (Revelation ii, 17).

In addition to the custom of cursing their enemies by means of these stones, the rite of bewitching by means of dolls was prevalent. These "revenge dolls," common to all nations, are "leaden figures shackled with chains. They were named after an adversary, and it

was then believed that whatever was inflicted on them would befall the enemy himself."

These two ancient modes of imposing a curse throw a valuable sidelight on the life of the inhabitants of a small country town in Palestine.

During the progress of the excavations the remarkable caves in the vicinity of the several sites, and more especially of Tell Sandaḥannah, were systematically examined and planned by Mr. Macalister; and to him we owe the first attempt to grapple with the difficult task of classifying and approximately dating the rock-cuttings of Palestine. In his suggestive contribution to the *Memoir*, he has given plans, sections, and drawings of typical specimens, and brought together a mass of information upon which all future investigation must be based. It is true that, in one sense, the result is disappointing, for little was found in the caves to throw light on the origin and history of those who made, and in some cases lived in, them; but it is not likely that more precise information can be obtained without the complete excavation of a few selected caves.

Mr. Macalister's conclusions are that a few of the caves are later than the Seleucid period; that a few others are earlier than the end of the Jewish monarchy; and that there is Scriptural evidence that similar caves existed at a still earlier date. Certain chambers are prepared for special purposes, as cisterns, store-chambers, &c., and these being required at all periods, may be of any date. Other purposes, such as chambers for religious rites, filters, traps for wild beasts, prisons, quarries, &c., may be inferred from the character of the chambers, or from Scriptural reference to them. Some caves were used as places of refuge. There is reason to believe that other caves contained a troglodyte population, not improbably distinct from the inhabitants of the towns and villages on the surface, and possibly aboriginal. There is archæological evidence from which it is possible to infer that cremation was practised by these troglodytes, and perhaps taught by them (with the use of columbaria) to the inhabitants of the surface.

In Palestine, where the number of objects that can be dated is so small, pottery affords almost the only basis for the establishment of chronological order. The foundations for the study of the pre-Roman pottery of Palestine were laid by Dr. Petrie in 1890, when he excavated the stratified mound of Tell el-Ḥesy (Lachish). This

site, with its 60 feet of *débris*, was an ideal place for excavation. Owing to the nature of the material—sun-dried brick—the stratification was but little disturbed. When one town fell into ruins it was buried in its own ruins, its ground plan being in part preserved, and on these ruins rose the foundations of the next. It was thus possible to note the changes in the styles of pottery from town to town; to compare the pottery of each town with the other articles, such as amulets, scarabs, &c., found in it; and to divide the pre-Roman pottery into groups or periods, which have been termed by Dr. Bliss and Mr. Macalister early pre-Israelite, late pre-Israelite, Jewish, and Seleucid.

In the *early pre-Israelite period*, which ends about B.C. 1500—*i.e.*, before the Hebrew conquest—the pottery is characterised by a complete absence of Mykenæan or Phœnician influence. Similar types found by Petrie in Egypt are believed by him to have been introduced by an immigration from Palestine 2,000 years before the First Dynasty. Most of the pottery is hand made; and the surface is generally covered with a red wash, though yellow and black washes were also used. The earliest specimens show the richest colour and highest polish. No lamps were found with the pottery of this period.

The *late pre-Israelite period* is that during which Mykenæan or Phœnician influence appears in the pottery. It commenced shortly before the Hebrew conquest, and ended during the Jewish monarchy, extending from about B.C. 1500 to about B.C. 800. Amongst the pottery found were direct importations of Cypriote and Mykenæan ware, showing the characteristic glaze and patterns; local imitations of Cypriote ware; and Mykenæan and sub-Mykenæan types. Associated with the pottery displaying marked Mykenæan characteristics were local styles, which originated not long before the establishment of the Hebrews in Palestine, and continued into the times of the Jewish monarchy. A careful analysis of the painted sherds (Græco-Phœnician and native coloured ware), their date, technique, and patterns, was made by Mr. Macalister, who considers that, whilst in some cases Ægean or Mykenæan analogies are suggested, the remains most nearly approximating to them are those found by M. Chantre at Boghaz Keui and Kara Euyuk in Asia Minor.

During the *Jewish period*, which extends from about B.C. 800 to B.C. 300, Mykenæan and Phœnician influence is almost lost; the

peculiar coloured decoration, direct foreign importations and imitations, and other features have gone; older types survive in a degenerate form, side by side with new styles, and, as a rule, the pottery is coarse and ungraceful. The most interesting fragments belonging to this period are the jar handles with royal and potters' stamps. The *royal stamps* display either a two-winged or a four-winged figure, and in each case bear above the symbol the legend "To the King," in old Hebrew characters, and below it the name of one of the four towns, Hebron, Socoh, Ziph, and an unknown place, Mmst, which has been provisionally vocalised Memshath, all in relief. The four-winged figure is sometimes treated naturally and sometimes conventionally. One specimen displaying a four-winged beetle with well-articulated body and well-shaped head, shows that the symbol represents the Egyptian scarabæus with outstretched wings. The two-winged figure is probably a simple winged solar disc, but it has been held to be the figure of a god developed from the winged disc, a two-winged scarabæus, and a bird. Various theories have been advanced with regard to the use of the jars and the meaning of the legend: that the town-names indicate the sites of potteries connected in some way with the king; that the jars were intended to contain tribute of oil, wine, or grain for the royal storehouses, and that the stamp was the official certificate of their capacity; that the four towns were the centres of districts in which dues in kind were collected, and that the jars were officially stamped measures of capacity which varied locally. Unfortunately no perfect jar was found. The *potters' stamps* generally consist of two names, enclosed in a circle or ellipse, and separated by one or two horizontal bars. In nearly every case the names are biblical—Hosea, Shebaniah, Abdi, Menahem, &c. A few bear devices such as a figure hunting a stag, a horse, a man with a staff, the ancient sign called "Solomon's seal," &c.

The *Seleucid period* extends from B.C. 300 to Roman times. The pottery is very rarely associated with the red and black figured Greek ware, which disappears about B.C. 350. It includes Greek imports, such as Rhodian amphoræ with stamped handles, and "Samian" ware, Jewish survivals, and ware displaying Greek influence. Special interest attaches to the large find of lamps, which supplies a link in the historical chain of development of the lamp in Palestine. The legends of the stamps on the Rhodian amphoræ contain the name of the magistrate eponymous of the

year in which the jar was stamped, or the name of the merchant, and the month of the magistrate's year of office.

The burial of jars, in combination with lamps and bowls, within the limits of towns is of great interest. Dr. J. G. Frazer, Trinity College, Cambridge, suggests that these jar burials may be an example of the widespread custom of going through a form of burial in the cases of persons whose bodies could not be obtained. Specimens of pottery, representing, in some cases very rudely, human and animal forms, were found in the *débris* belonging to the pre-Israelite and Seleucid periods. Flint implements, rude stone images, stone vases and dishes, weights with Hebrew inscriptions, and a large variety of small objects in bone, brick, bronze, and iron, were also dug up at the various sites.

Turning now to the future work of the Fund, it will be observed that the site which Mr. Macalister is excavating is one that has a continuous history from a period long prior to the Hebrew conquest to that of the Crusades. Mr. Macalister's paper (*see* p. 227) gives a succinct account of the history of Gezer, and of the state of its site at the present day. It is only necessary here to allude to the statement in the Bible, that the Pharaoh of Egypt burnt Gezer, and gave the site to his daughter, Solomon's wife, and that Solomon rebuilt the town. If, as there is every reason to hope, a well-defined layer of ashes marks the position of the burned city in the accumulated *débris*, all objects found below that layer must be earlier than Solomon's reign, and all above it later than the destruction of the town. Thus there will be a definite historical fact to which all finds can be referred, and it will be possible to verify the system of classification which has been provisionally adopted with regard to the pottery. Some light may also be thrown on the history of the Philistines, and upon the civilisation of the country during the reign of Solomon. The mound is the most extensive yet excavated by the Fund, and its thorough exploration is of great importance to biblical archæology. For this undertaking a large sum is required, and the Committee hope that the subscribers will give it that financial support which is so liberally accorded by Austrians and Germans in the case of their excavations at Taanach, Megiddo, and Ba'albek.

The Chairman.—I feel sure you will all agree with me in thanking Sir Charles Wilson for his very interesting lecture. I learnt

one thing that I never realised before—viz., that pottery is the oldest art in creation. I only wish some of those beautiful forms we saw could be brought into our civilised life; I have no doubt they would find a market, and would justify a position on our sideboards. I think what the lecturer has told us about water and aqueducts generally, only shows how far superior they were in the days of the Israelites in those matters. The new aqueduct, which cost so much money, is really inferior to that of Solomon's time. There is nothing new under the sun, and I am very glad that the works of Solomon should be reproduced, for it really shows the science of the present is not superior to the science of the past. Anyway, however that may be, I quite endorse the feelings of the audience present, that we owe a deep debt of gratitude to Sir Charles Wilson, the Chairman of the Executive Committee, for having so well told us, and so well illustrated, the work of the Society during the past year. In conclusion, we hope that all present will considerably increase their subscriptions.

It was proposed by the Chairman, seconded by Mr. Crace, and carried unanimously, that the following gentlemen be elected to the General Committee:—Colonel Johnston, R.E., Director-General of Ordnance Survey; Colonel Bramble; Sir William Charley, K.C.; the Dean of St. Patrick's; Mr. James Hilton; the Rev. Arthur Carr, and Dr. E. W. Gurney Masterman.

It was proposed by the Chairman, seconded by Colonel Watson, and carried unanimously, that the Executive Committee be re-elected with the addition of Mr. F. A. Eaton, Secretary of the Royal Academy of Arts.

On the motion of the Chairman, seconded by Mr. Crace, a very cordial vote of thanks was given to the Council of the Royal Institution for their kindness in allowing the Annual Meeting of the Fund to be held in the theatre of the Institution.

Sir CHARLES WILSON.—There is one duty I think we ought to perform before we part, and that is to pass a vote of thanks to Lord Eustace Cecil for taking the chair at our Annual Meeting. We know that this is a very busy time for one who is so fully engaged, and we are much indebted to Lord Eustace for so kindly coming here to-day. Lord Eustace has visited Palestine, and has always taken a warm interest in the work of the Fund. I am

afraid that if he went out now he would find very great changes, and not all for the better. In fact, the country is changing every year, and to those who knew it in the old days the changes are not all improvements. I have much pleasure in proposing a hearty vote of thanks to Lord Eustace Cecil for taking the chair on this occasion.

Dr. GINSBURG.—I beg to second that.

The vote of thanks having been carried unanimously,

The CHAIRMAN, in responding, said: Ladies and gentlemen, I give you my cordial thanks for the vote of thanks that you have just passed. It has afforded me very great pleasure indeed to take the chair on this occasion. Sir Charles Wilson has referred to the vandalism of the present day; I remember also the vandals of the past. When I went to Ba'albek I saw the interior full of the names of everybody under the sun, from all parts of the world, but there was one witty Frenchman who had written underneath the names in very large letters: "The names of fools are to be found everywhere." Now, I am afraid there is a deal of folly of that kind. The folly of writing your name is not very great, but when it comes to breaking off a piece of an old monument, and taking it away in your pocket, and putting it into your portmanteau, I think that man or woman, from an historical point of view, commits a very serious misdemeanour. I hope that what has been said to-day, and what the Committee have said before, and have tried to impress upon the public, will bear some fruit. I only wish the Turkish Government could be induced to give a little more protection to these monuments, otherwise I am very much afraid that, with the vandalism of the East and the vandalism of the West, monuments of every sort and kind will, in a very short time, become things of the past. I not only hope that this Society will be able to continue the good work of increasing our knowledge, but trust that it will be able to do something towards the protection of those monuments. I beg to thank you very much indeed.

The proceedings then terminated.

THE HISTORY AND SITE OF GEZER.

By R. A. Stewart Macalister, M.A., F.S.A.

It may be advantageous to supply a brief abstract of the history of Gezer, as at present known, and a short description of the site as it now exists; this will clear the way for references to historical events or surface indications which it may be necessary to make in future reports. For the historical portion of this communication I rely almost entirely on the work of Professor Clermont-Ganneau, who has studied the subject exhaustively in his *Recueil d'Archéologie Orientale*, I, pp. 351–391, and again in his *Archæological Researches in Palestine*, II, chap. v, pp. 224–275.[1] To these works reference should be made to fill in the outlines of the following conspectus.

I. *Gezer before the Israelite Occupation.*—Our sole authority for the history of this misty epoch, in which Gezer first makes its appearance, is, at present, the Tell el-Amarna correspondence. Three letters in this series of documents were written from Gezer itself, in the name of Yapaḥi, the Governor. These are to the effect that Gezer is hard pressed by the Ḫabiri; that Yapaḥi's brother has rebelled and joined the Ḫabiri, and seized the town of Mu**ḫazi; that the people called Suti are terrifying the inhabitants; let the king send a favourable answer and assistance.[2] In other letters, not apparently written from the town itself, reference is made to events connected with it. The bandit Lapaya excuses himself to the king for having entered the city, and deprecates the evil reports sent to the king concerning him.[3] Two obscure writers, Arzaya and Addu-daian-(šapaṭ?), refer to Gezer, but on tablets so fragmentary that the context cannot be recovered.[4] And Abd-ḫiba, of Jerusalem, complains to the king, in formulæ similar to those used by Yapaḥi,

[1] *See* also the *Recueil*, III, pp. 116–126 (epigraphical remains), 264–268 (Gezer and environs). Also *Quarterly Statement*, 1899, pp. 118–127; *Revue Biblique*, July, 1899, pp. 422–427.

[2] Winckler, *Keilinsch. Bibliothek*, V, Nos. 204–206. Knudtzon, *Beit. z. Assyr.*, IV, 113, reads Mu-uḫ-ḫa-zi.

[3] *Ibid.*, 163.

[4] *Ibid.*, 177 239. The second of these seems to relate the destruction or injury of the town by Biíia, son of Gulati, whoever he may have been.

[5] *Ibid.*, 180, 183.

accusing the Gezerites and others of disloyalty. "The neighbourhood of Gezer, of Askalon, and of Lachish, have given them (the rebels) food, oil, and every necessary." "Milki-il and Šuardata have bargained with the men of Gezer, of Gimti, and of Kilti, and have taken the surroundings of Rubuti. The king's land is lost to the Ḫabiri, and a town named Bit Ninib, near Jerusalem, is lost to the men of Kilti." The king is accordingly entreated for assistance.

II. *Gezer during the Israelite Immigration.*—A successor of Yapaḥi named הֹרָם (Horam) in the Hebrew, Αλαμ or Ελαμ in the Septuagint version of Joshua,[1] came to the help of Lachish against Joshua, but was defeated and slain (Joshua x, 33). His Canaanite subjects were not driven out, but were reduced to servitude (xvi, 10). On the partition of the country, Gezer formed a link in the chain of towns along the south border of the territory of Ephraim (xvi, 3), but was assigned as a Levitical city to the sept of Kohath (xxi, 21).

III. *Gezer under David.*—In David's time it would appear that Gezer was in Philistine hands. That mysterious people, defeated by David in the Valley of Rephaim, near Jerusalem, were pursued "from Geba until thou come to Gezer" (2 Samuel v, 25); the latter being the terminus of the chase, presumably because it was within Philistine territory. An obscure story, describing the slaughter of certain Philistine giants, also refers, in one of its versions (1 Chronicles xx, 4), to Gezer—that being the scene of the slaying of Sippai or Saph by Sibbecai. The other version (2 Samuel xxi, 18) locates the same incident at an unknown place—Gob; this name is regarded by M. Clermont-Ganneau, with great probability, as a copyist's error (גוב for גזר).

IV. *Gezer under Solomon.*—The Pharaoh who was Solomon's father-in-law burnt Gezer, and gave the site to his daughter, Solomon's wife. Solomon restored it (1 Kings ix, 16). The circumstances surrounding this curious incident are unknown, but from the point of view of the excavator it is of capital importance. The excavations at Tell el-Ḥesy and Tell ej-Judeideh have already illustrated the permanence of layers of ashes; and it is to be expected that the conflagration caused by the Pharaoh will be

[1] [The true name is, therefore, uncertain. The LXX gives the same forms for the equally obscure Hoham, King of Hebron, mentioned in the same chapter (*v.* 3).—Ed.]

found to have left its mark in the stratification of the *débris*. This evidently would give a valuable date-level. It remains to be determined—and the excavation may enable us to determine—who this "Pharaoh" was, and whether he was actually an Egyptian king, or (as has recently been suggested) a ruler of the North Arabian land of *Muṣri* or *Muṣur*, the existence of which has been indicated by the Cuneiform tablets, and whose name could be easily confused with מצרים *Miṣraim*, the Hebrew name for Egypt. Apparently there had been a previous Egyptian conquest of Gezer, referred to on the great stele of Meren-Ptah, in the words *mḥw m K'ḏ'r*, "Gezer, too, is taken."[1]

V. *Gezer in the Maccabean Period.*—During the later Jewish monarchy history is silent respecting Gezer; but (as *Gazara*) it reappears several times in the narrative of the wars between the Jews and the Seleucids. Thus we hear of it as being once more the terminus of the chase of a conquered enemy; Judas pursued Gorgias to "Gazara, and unto the plains of Idumaea, and Azotus, and Jamnia" (1 Macc. iv, 15). Again, Bacchides, after his defeat by Jonathan, fortified and provisioned Gazara among the other works he carried out "to vex the Jews" (ix, 52). This shows that the town, at the time, was out of Jewish hands: of its siege, capture, and purification we read a few chapters later (xiii, 43–48), though in the text "Gazara" has been corrupted to "Gaza." (The English Revised Version has adopted the correction.) It would appear, however, from a letter of the Roman Senate to Hyrcanus,[2] that soon afterwards it had again passed out of Jewish possession and was under Antiochus.

VI. *Gezer in the Crusaders' and Arab Period.*—As yet the boundary inscriptions, giving us the name of (probably) a governor, Alkios, alone bridge the gap between the Hasmoneans and the Crusaders. "Mont Gisart" is of importance in the history of the Latin kingdom. A family took its name from the locality, and a castle was erected on the site. Here, too, a battle took place in 1177, in which Baldwin IV gained a great victory over Saladin. Saladin was again encamped here, in 1191, and conducted futile negotiations with Richard Cœur-de-Lion. After

[1] It appears also in the list of Palestinian cities subjugated by Thuthmosis III (*i.e.*, probably about the commencement of the fifteenth century).

[2] Josephus, *Ant. Jud.*, XIII, ix, 2.

the departure of the Crusaders, the place once more assumes a little importance in connexion with an encounter between the Governor of Jerusalem and a predatory tribe of Bedawîn. This was in 1495.

While it is unprofitable to indulge in vague speculations upon what may or may not await the explorer of this mound, it is hardly possible to avoid reflecting that, as three letters of the Palestine side of the Tell el-Amarna correspondence come from Gezer, it is only reasonable to expect one or two letters of the Egyptian side of the correspondence within the site; and that traces of the early Levitical occupation; of the Philistines; of the destruction and restoration of the city under Solomon; of its fortification by Bacchides; and of its tenure by the Crusaders, should not be sought in vain. Besides these landmarks of local history, upon which light ought to be thrown, we have wider problems before us, to the solution of which the projected excavations should help us. In a brief paper, read at the General Meeting of the Fund (16th July, 1901), I have already indicated some of these: the disposal of the dead by the pre-Israelite tribes; the nature and extent of Mykenæan and Egyptian influence on Palestinian culture; the period of the introduction of iron; and the ethnological affinities of the Philistines and other coast-dwellers.

The identification of the mound beside the modern village of Abu Shûsheh with the ancient Gezer was put forward some thirty years ago by M. Clermont-Ganneau, and confirmed by the brilliant discovery of the boundary inscriptions set by Alkios—the circle of which will, it is hoped, be completed during the two years' occupation of the site to which the Palestine Exploration Fund is looking forward. We thus have epigraphic evidence of the correctness of this identification, such as is to be found in the case of no other ancient site in Palestine. The name of the mound appears on the map as *Tell Jezar*; but in speaking of it the people always refer to it as *Tell ej-Jezari*—with the definite article inserted and a vowel at the end.

The mound is in length about 1,700 feet, and in breadth, at the narrowest part, about 300[1]; the long axis lies north of west by south of east. It is the largest *tell*, when the available

[1] These measurements are, of course, merely preliminary. Proper measurements and plans will be made as soon as the work commences.

surface is taken into account, that has yet been attacked by the Palestine Exploration Fund: for though Tell eṣ-Ṣâfi was considerably larger, its encumbered surface made it impossible to examine more than a very small portion of the *débris*. The western end of the present mound is occupied, first by a small mulberry plantation, then by the house and farmyard erected by the late Mr. Bergheim, and then by the village cemetery, and a small half-ruined wely or shrine of the local saint. I do not think, however, that more than one-tenth of the site is thus covered, and the remainder is quite open. Moreover, there is little or no *débris* under the house and farmyard: the rock crops out to the surface round about them, so that even were this end of the mound free we should not require to excavate there.

The depth of *débris* seems rather less than in other mounds that have been examined. So far as it is possible to judge, it does not appear to be more than 15 to 18 feet. But so much depends on the configuration of the concealed rock-surface that appearances are apt to be deceptive. The outline of the upper surface rises at each end of the mound to a hillock, with a saddle between crossing the middle. The occurrence of thick walls, just cropping out from the surface, in the eastern half, shows that the eastern hillock is composed of the *débris* of a large fortress or acropolis, like that discovered at Tell Zakariya. On the south side of the saddle the city wall is plainly traceable. At the eastern side of the western hillock are two stones, standing with their heads above ground, exactly resembling the three bætylic columns that were found in the "High Place" at Tell eṣ-Ṣâfi, and probably part of a similar structure.

Under the mulberry plantation were found many cut and dressed stones which were adapted for use when Mr. Bergheim's house was erected. I suspect that these are remains of the Crusaders' fortress. This mulberry plantation, situated at the west end of the mound, and commanding a wide view of the plain as far as the sea, is the most likely place for such a structure. It must be confessed, however, that a careful examination of the walls of the house and farmyard failed to reveal any stones with the characteristic masonry dressing of the Crusaders.

The pottery strewn over the surface of the mound is nearly all ancient, *i.e.*, belonging to the pre-Israelite period. This is curious when we consider the importance of the site in later times. There

were, however, one or two Rhodian jar-handles with stamps impressed upon them. Except a carnelian bead, nothing else calling for special remark has been found by me on the surface of the ground.

A curious system of aqueducts and waterworks seems to radiate from the copious springs round the *tell* which still call for examination: these appear to be of the Roman period, or later. And, in conclusion, I may remark that the fever for tomb-robbing which has recently spread over Palestine does not yet seem to have reached the immediate neighbourhood of Abu Shûsheh, so there is reason to hope that *one* cemetery may yet be rescued from the clutches of the syndicate of fellahin, pedlars, and tourists who are rapidly making Palestine archæologically a desert.

REPORTS BY R. A. STEWART MACALISTER, M.A., F.S.A.

I.—Bîâr es-Seb'a.

In company with my friends, Dr. Paterson, of Hebron, and Messrs. Bergheim and Peters, of Jerusalem, I visited Bîâr es Seb'a[1] (Beersheba) last April, and submit the following report on observations made at the time. This place, till recently deserted except by Bedawîn, is being "developed"; a large Government house and a Khân have been built, and barracks, shops, and houses are being rapidly erected. The population is said to number about 300 at present.

The materials for these new buildings are nearly all being taken from the ruins of a Byzantine town lying E.N.E. of the new site, and about a quarter to half a mile distant from it. Men are busily engaged in mining stones from the ancient foundations and in carrying them to the new sites, where they are being re-faced and built into the new houses.

If any antiquities are being found they are carefully concealed; the only object shown to any of our party was a defaced Byzantine

[1] I prefer to use the modern name, as the remains show that the biblical Beersheba cannot have been on this site—they are not old enough. Possibly the ancient town was at Tell es-Seb'a, about 2½ miles to the east.

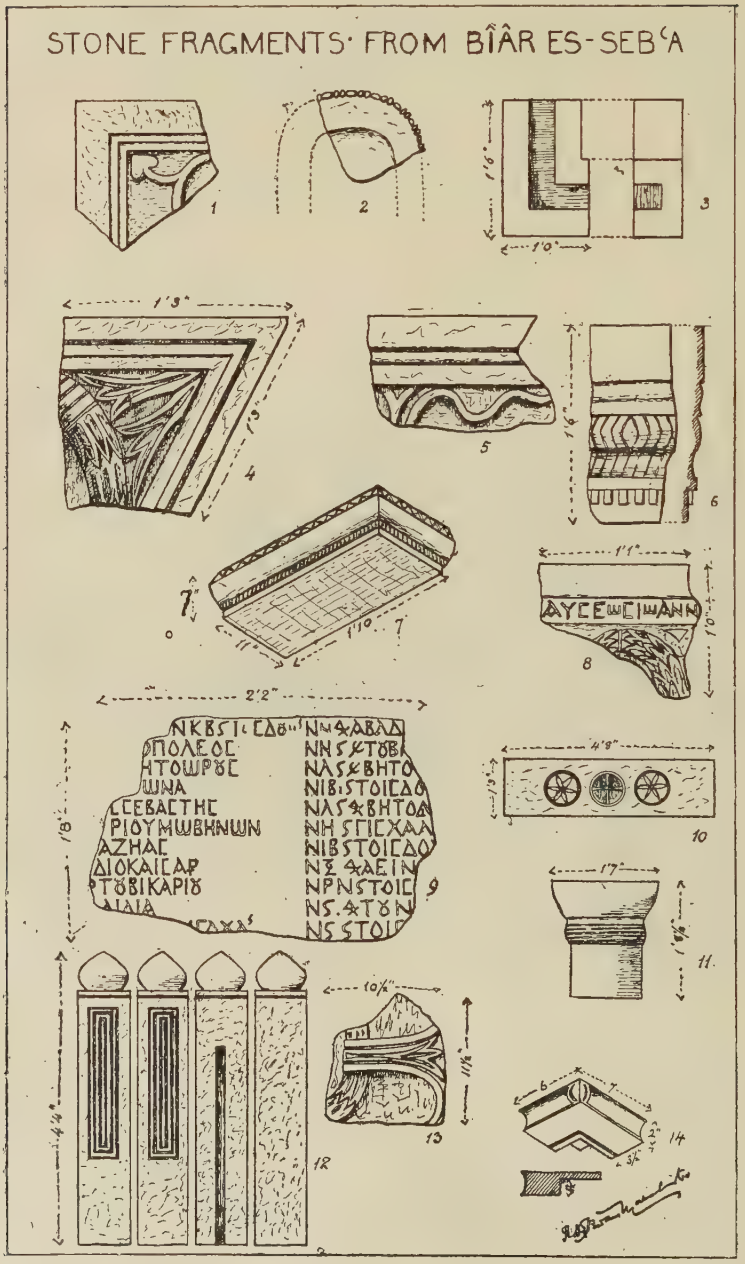
copper coin. Many fragments of ornamented stone are being uncovered, however, and are lying about in all directions. Large numbers of slabs of fine white marble, mostly plain, but some ornamented with mouldings, wreaths, and other designs, are to be seen.

The following is a catalogue of the principal fragments noted during our visit; drawings and photographs, some of which are here reproduced, may be seen at the office of the Fund :—

(I.) A large font, adapted for total immersion. It is 5 feet in diameter, 2 feet 7 inches thick. We were given to understand that

FONT FROM BÎÂR ES-SEB'A.

it is proposed to turn this into a basin for a fountain. In the bottom is a square hole, no doubt for a tenon or dowel to keep the font in position. About four weeks before our visit this font was still *in situ* in the baptistery, where it was found, and near it was a mosaic, which was seen by Mr. Hoyer, of Hebron, and described by him to me as the finest he had seen in Palestine.


STONE FRAGMENTS FROM BÎÂR ES-SEB'A
1
2
3
1'6"
1'0"
1'3"
1'3"
4
5
1'6"
6
7
1'10"
7
1'1"
10"
8
2'2"
18"
9
4'9"
10
17"
1'6"
11
4'4"
12
10½"
1'8"
13
14

Apparently it contained conventional patterns only. This has been completely destroyed.

(II.) The upper stone of a rotary corn-grinder, made to fit on a convex nether-stone, and turned by men or animals pulling the poles fitting into the side sockets. The grain to be ground was poured in through the top. Material, a hard, black, porous stone. Height and diameter each, 1 foot 10 inches.

(III.) Small Corinthian anta-capital in soft limestone, 10½ inches high, 1 foot 9½ inches long, 10½ inches broad.

(IV.) [Page 234, figs. 1*, 4, 5*, 13.] Slabs of fine white marble, with mouldings and other ornament.

(V.) [*Ib.*, fig. 2*.] Fragment of a marble dish, with bead and reel ornament.

(VI.) [*Ib.*, fig. 3.] One of a number of conduit channels found together. Limestone.

(VII.) [*Ib.*, fig. 6.] Fragment of a frieze, very debased, built upside down into a new house wall.

(VIII.) [*Ib.*, fig. 7.] Cornice in soft limestone.

(IX.) [*Ib.*, fig. 10.] Byzantine lintel of common pattern. There was a second in the same building yard, which I noticed; it had a plain cross, with the ends of the arms slightly expanding, in a circle. On returning the next day to sketch it, I found that in the meanwhile the ornamented face had been tooled away.

(X.) [*Ib.*, fig. 11.] Coarse debased Doric capital. Many similar to this are lying about. I saw also a much damaged Corinthian capital rather less debased in style.

(XI.) [*Ib.*, fig. 12.] One of a large number of boundary posts of common pattern. The four sides are shown in consecutive order. Two others are utilised in the staircase of the new Government house.

(XII.) [*Ib.*, fig. 14.] Fragment of a cornice (?) in fine white marble.

The following inscriptions are to be noticed:—

(*a*) A small fragment of fine marble, bearing the letters OY and part of a cross—probably the concluding letters of an epitaph.

(*b*) [*Ib.*, fig. 8.] Fragment of a white marble slab, with a wreath and the words . . . π]ανσεως Ἰωάννου . . . . .

* The fragments marked with an asterisk are small, and were not measured, so that I cannot give their exact dimensions.

". . . . of the falling asleep of John . . . ." Now in the Government house.[1]

(*c*) [Page 234, fig. 9.] This important stone is also in the Government house. It is a fragment of a marble slab bearing portions of two columns of writing. It is a list of names of towns, preceded by numerical signs, which I take to be their distances—presumably from the original position of the stone. The letters are all perfectly clear except the top line, which is worn. I read—

N κβ′ ς ι′ [Α]σδου[δ]	N νς′ Αβαδ[
[N — ς — Νικ]οπολεος	N ν′ ς ψ′ Του β[
[N — ς — Β]ητωρους	N λ ς ψ′ Βητο[
[N — ς — Αιν]ωνα	N ιβ′ ς Τοις Δο[
[N — ς]σ′ Σεβαστης	N λ′ ς ς′ Βητο . [
[N — ς — Κι]ριου Μωβηνων	N η′ ς Γισχαλ[ας]
[N — ς — Γ]αζηας	N ιβ ς Τοις Δου[
[N — ς —]Διοκαισαρ'	N ξς′ Αειν[
[N — ς] ρ′ Του Βιχαριου	N ρν′ ς Τοις[
[N — ς —]Αιλια	N ς ς′ Τουν[
[N — ς — Βητοσ?]οχα'	N ς ς′ Τοις[

I presume ς means *στάδια*, but I cannot guess what N stands for. The inscription, therefore, as we have it, commences by stating that the place is 22 "N," 10 stadia, from Ashdod (?), and then proceeded to give the distance from Nicopolis ['Amwâs], Bethhoron, Ainon, Sebaste, Kir Moab [Kerak], Gaza, Diocaesarea [Seffuriyeh], Fîk (?), Aelia [Jerusalem], and, perhaps, Beth-Zacharia (??). The second column has the distances intact, but the names (except Giscala) are not recoverable. I do not understand τοις, with which four of them begin; it is not (like *Beth* and *'Ain*, also illustrated) a common geographical prefix; and analogy with the rest of the inscription would lead us to expect a genitive rather than a dative—no doubt governed by an imaginary *ἀπό*. I was unfortunately not provided with material for taking a squeeze, so have to rely on a very careful drawing, reproduced on the plate.[2]

[1] *See* Professor Clermont-Ganneau's note, p. 269.

[2] *See*, further, the discussion of this stone by Professor Clermont-Ganneau, pp. 270, *et seq.*

II.—A Tomb near Edh-Dhâherîyeh.

On the west side of the road from Hebron to Edh-Dhâherîyeh, and not far from the latter village, is an interesting tomb-chamber, which appears to have been recently opened. I entered it with some difficulty (the chamber being almost full of earth), and examined it as well as I could; unfortunately, I had no candle, and was obliged to light the cave with matches only. I estimated the main chamber, to which the entrance shown gives access, to be about 12 feet square. In each wall are two deep arched recesses. These are choked up with earth, except those in the back wall of the cave; they each show a doorway leading to a plain, square, sepulchral chamber, without any provision for the reception of bodies. Presumably, the arched recesses in the side walls also lead to sepulchral chambers, but only the semi-circular tops are at present to be seen.

III.—Rock-cut Tomb near Bethlehem.

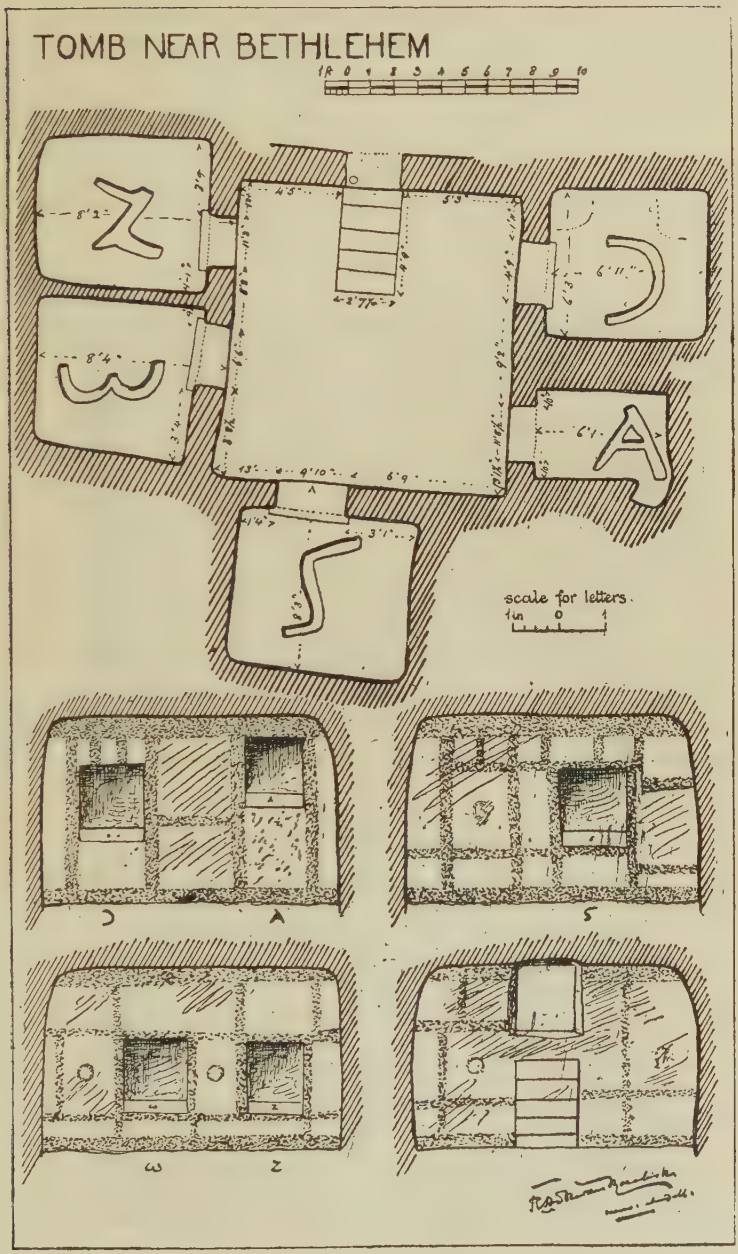
I am indebted to the Rev. J. E. Hanauer for calling my attention to the very interesting tomb, a representation of which is here given. It is situated in a vineyard belonging to the American convent, about half-a-mile east of Rachel's tomb, and a little distance south-east of the house in the vineyard. The tomb consists of one chamber, about 13 feet square, entered by a flight of five wooden built steps from a doorway, which is closed by a swinging stone door—an extremely rare device in the neighbourhood of Jerusalem. This door, which is 2 feet 6 inches square, has four moulded panels picked out in red, and has been secured by a bolt, the handle of which passed through a slit in the door, and was padlocked to a staple that formerly was let into the left-hand jamb. These fastenings have, of course, long since been torn away, as well as the ring with which the door was closed. The door to the tomb is at the bottom of an open court, 9 feet 5 inches deep below the present surface of the ground, and entered by steps running down its eastern side. Indications are not wanting that this court was originally a cistern, afterwards adapted as the entrance to the tomb: in the wall above the door are some signs of a shaft having been formed. The entrance to the tomb is an irregular hole, filled in with the necessary jambs and lintel of the door, with smaller stones as "packing" between them and the edge of the rock.

There are five subsidiary chambers opening off the main chamber. One—the first on the left-hand side—has evidence of having had an arcosolium on the eastern wall; the second on the same side is broken into a natural cavity in the rock. The other chambers, which are plain, four-sided, and rather roughly cut, do not call for any special notice.

These subsidiary chambers were closed by square stone slabs fitting into the openings, by which they communicated with the

Rock-cut Tomb near Bethlehem.

central room. Four of these remain. They were evidently once provided with metal rings in the centre of the outside for lifting and securing them; these, like the other portable contents of the tomb, have naturally disappeared. On the outer face of the sill of each is cut a Greek index-letter corresponding with letters cut on the doors themselves, and showing which door fitted which doorway. Large-scale facsimiles (from rubbings) of the letters are shown in the plan (p. 239), each letter being written within the chamber which it


TOMB NEAR BETHLEHEM
scale for letters
1 in 0 1

denotes. The letters under the doorways are picked out with red paint. They are Ɔ, A, Ƨ, Ѡ, Z, the C being inverted as though it had been cut by someone lying on the floor of the inner chamber and leaning over the door-sill. It will be noticed that these letters are not in alphabetical or numerical order. They may have been chosen at random; if not, I can only guess that they are meant to read backwards, making what sounds like a not impossible Greek name, *Ζώστας*.

The principal chamber is plastered, and the plaster ornamented with roughly-painted panels outlined in yellowish-brown paint. Some of the panels contain a circle in the same colour; a few of these circles have been hacked away. Under the door of the chamber marked A the plaster is broken, and thereby some device (or inscription?) has been quite destroyed.

Beside the open court leading to this tomb is a wine or olive press with remains of a mosaic floor. There are also one or two other caves, tombs, and cisterns in the same vineyard, none of which, however, display details of interest.

IV.—A Greek Inscription from Nâblus.

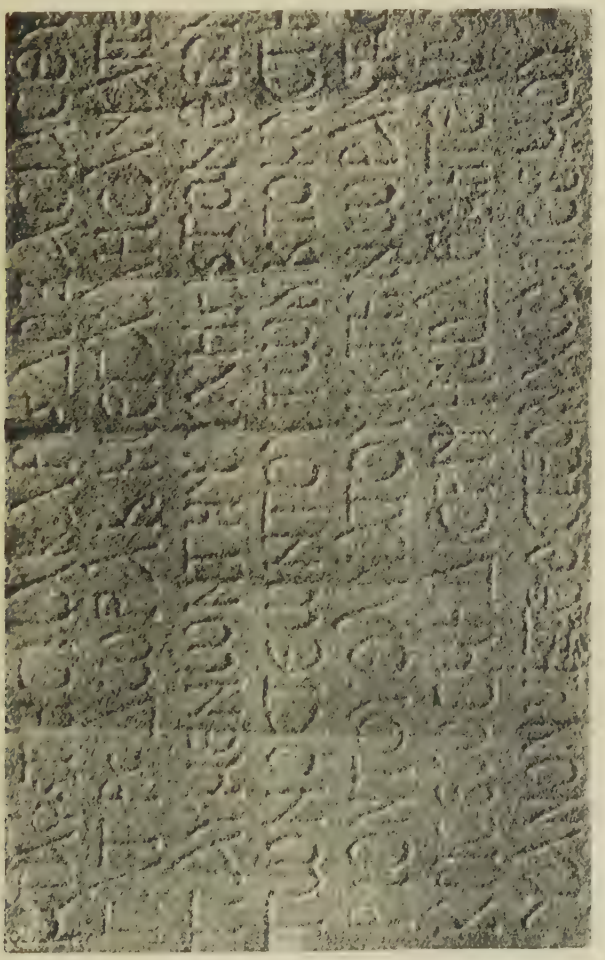
I forward a squeeze, given me by Dr. Masterman, of a Greek inscription shown him by Dr. Wright, of Nâblus, during a recent journey through the country. It is cut on a slab of limestone, measuring 1 foot 6 inches by 11½ inches by 2 inches. The inscription runs thus—

ΜΤΑΦSΤΗCΜΑΚΑΡΙSΔΟΞΑCΙΑCΘΥ
ΓΑΤΡSΔΩΡΑΚΜΕΓΑΛΗCΑΝΑΠЄ
ΠΑΥΜΕΝΩΝΤΗΨΥΧΗSΚΤΟΝΘЄΟΝ
ΤΩΝΟCΤЄΩΝΤΟΥΤΩΝΚΤΟΜΥCΤΗ
ΡΙΟΝΤΟΥΘΑΝΑΤΟΥΚΤΗΝΩΡΑΝΤΗC
ΚΡΙCЄΩCΜΗΔΙCΡΙΨΗΩΔЄΜΗΤЄΛΙΜ
ΨΑΝΟΝΜΗΤЄΟCΤЄΟΝΧΩΡΙCЄΜΟΥ

Accepting a correction that Père Legrange has made (to whom the expansion of the initial abbreviation is also due), my interpretation of this curious epitaph is as follows:—

"Μόνος τάφος τῆς μακαρίας Δοξασίας, θυγατρὸς Δώρα καὶ Μεγάλης. ἀναπεπαυμένων τῇ ψύχῃ. Καὶ τὸν Θεὸν τῶν ὀστέων τούτων, καὶ τὸ μυστήριον τοῦ θανάτου, καὶ τὴν ὥραν τῆς κρίσεως, μηδὲς ῥύψῃ ὧδε μήτε λίμψανον μήτε ὀστέον χωρὶς ἐμοῦ.

"The single [*i.e.*, separate, private] tomb of the Blessed Doxasia, daughter of Dôra and Megalê, whose lives have closed. And [I adjure] the God of these bones, and the mystery of death, and the hour of judgment, that no one here tear either relic or bone out of me."



Greek Inscription from Nâblus.

The apostrophe is a mark of abbreviation, except after ψύχη in the third line, where it fulfils the functions of a full stop. The iotacism in μηδὶς and λίμψανον [for λείψανον] is also to be noted. The formula of adjuration here employed, so far as I know, is unique.

[Canon Hicks, to whom a copy of the above was submitted, has kindly favoured us with the following notes :—

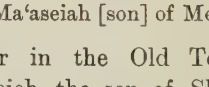
"The only doubt I have concerns the M̊ at the opening of line 1. It stands either for μό(νος) or μό(νον), 'the sole grave,' or 'exclusively the grave.' The sense is the same either way."

In regard to the rest of the epitaph, he notes the unclassical construction of τὸν Θεόν, "by the God," and the unusual character of the objects of adjuration. The names Doras (so, not Dora, writing Δωρᾶ) and Doxasia are new to him. For Megalê we may compare the Greek inscription from Gaza, edited by Professor Clermont-Ganneau, *Archæological Researches*, II, p. 401, *seq.* "Doxasia is easily formed from Δοξάζω. Doras is an abbreviation of the ordinary kind (especially in later and Alexandrian times) from Δωρόθεος, like Ἀρτεμᾶς from Ἀρτεμίδωρος." His translation runs :—

"The sole tomb of the blessed Doxasia, daughter of Doras and Megalê at rest in the spirit. And by the God of these bones, and the mystery of death, and the hour of judgment, let no one cast into this grave either corpse or bone without my permission (*or*, except me)." He ascribes it to a date not later than the 2nd century, A.D.]

V.—An Old Hebrew Seal from Deir Abân.

I forward a wax impression (given me by Mr. Hanauer) of an amethyst seal that recently came into the market at Jerusalem. It is one of the results of the wild fever of illicit digging that has spread over the whole country south of the Jaffa and Jerusalem railway. The inscription, in old Hebrew letters, is—



"Of Ma'aseiah [son] of Meshullam."

Both names occur in the Old Testament; by a curious coincidence a "Maaseieh the son of Shallum" is mentioned in Jeremiah xxxv, 4.

There is a small stop rather like a straight apostrophe or a vertical accent, after the final ם. Similar marks have been found in jar-handle inscriptions as hyphens or word separators.[1]

[Professor Sayce writes respecting this seal:

"The seal is of the usual Israelitish type, the double name of the owner recorded on it being divided by two straight lines. As I have suggested in a former communication, the double name probably means 'X the son of Y,' like Mustafa 'Ali or Mohammed Hasan in modern Arabic. The letters resemble in form those of the Siloam inscription, though the *shin* and the upper part of the *mem* show a somewhat later development, like the corresponding letters in the Phœnician *graffiti* at Abu Simbel. Palæographically, therefore, the seal must be assigned to the end of the 7th or the beginning of the 6th century B.C.

"The inscription reads:

למעשיהו[ו] משלם |

'Belonging to Ma'aseiah Meshullam.'

"If the final *waw* of the first name was ever written, it must have been engraved over the border of the seal. After the second name a perpendicular line is drawn, marking the end of the legend.

"Ma'aseiah and Meshullam are names characteristic of the later period of the Jewish monarchy. The first name is that of several persons in the books of Jeremiah and the Chronicles. One of these is 'Maaseiah, the son of Shallum, the keeper of the door,' mentioned in Jeremiah xxxv, 4, in whom those who will may see the Ma'aseiah Meshullam of our seal."]

VI.—A New Greek Inscription from Jerusalem.

Mr. Herbert Clark, the U.S. Vice-Consul at Jerusalem, has kindly allowed me to make a squeeze (which I forward) of a fragment of limestone with a portion of a Greek inscription, recently found in digging the foundations of his new house at Jerusalem. The situation is on the north side of the road leading to the Convent of the Cross, some distance east of the great cemetery which contains the Birket Mamilla.

The slab measures 1 foot 2 inches by 1 foot 6½ inches. The inscription is shown reduced to scale in the annexed diagram, and apparently reads

\+ Θήκη δηαφ[έρουσα] (*sic*) | Ἀροντήου [υἱοῦ ?] | τοῦ Θουπ[? . . . .

"Private tomb of Aronteios son of Thoup[. . . ."

[1] *See* also the remarks upon the seal by Professor Clermont-Ganneau, p. 263.

No other fragments of the stone were found. It was not in its original position, having been adapted at a later time as a

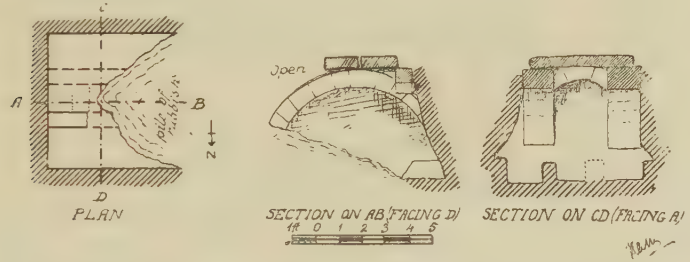
Greek Inscription from Jerusalem.

building stone in the lining of another grave. The latter, apparently, showed no details calling for notice.

VII.—On a Tomb beside the Bethlehem Road.

The combination of masonry with rock-cutting is very rare in the tombs round Jerusalem. It is found (1) in the great tomb commonly called Mariamne's, on Nicophorieh, the chambers of which are lined with stone slabs; (2) in the tomb No. 29, in Wâdy er-Rababi (*Quarterly Statement*, 1901, p. 145), in which a weak part of the stone has been strengthened by building a pier against it; (3) in the Sûr Bâhir tombs (*see* Mr. Dickie's description in *Excavations at Jerusalem*, p. 239); (4) probably formerly in the "Tombs of the Kings"; and (5) in the so-called "Gordon's tomb," in which not only was one grave formed by a moveable slab, but the doorway must have had some structure of masonry against it. A trough running in front of the door shows that this tomb must have been

closed by a rolling stone of the flat disc-shape, also found at the "Tombs of the Kings," at "Mariamne's tomb," in one of the St. Stephen's group, and in the "*Ferdûs er-Rûm*," in Wâdy er-Rababi. A masonry casing must necessarily have existed to prevent this stone disc from falling outwards. This, by the way, effectually disposes of the claim of the tomb in question to be the Sepulchre of Christ, if we are to accept literally the statement of Matthew xxviii, 2, that the angelic apparition sat *upon* the stone. Such a statement necessarily implies a spherical boulder, rolled freely up to, and away from, the door (as in tomb 29, Wâdy er-Rababi), not a flat disc constrained to move in a built-up alley.



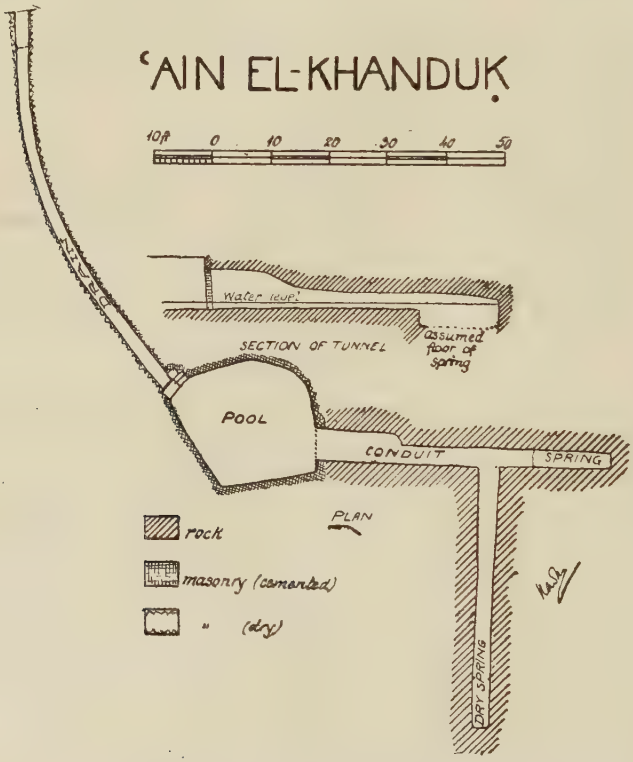
A sixth tomb in which masonry is combined with rock-cutting is that shown in the accompanying plan and sections. It is a small single chamber, about 6 feet each way, underground on the east side of the road from Jerusalem to Bethlehem. The hole in the roof, giving admission to the chamber, will be found on the edge of the road just beyond the convent of the Clarisses. There are two sunk bench graves, much broken, hewn in the rock, in arcosolia, the arches of which are built and support moveable cover-slabs. The tomb is considerably injured, and much choked with fallen stones and rubbish.

VIII.—'Ain el-Khanduḳ.

'Ain el-Khanduḳ (عين الخندق, "the spring of the ditch") appears in its proper place on the inch map, Sheet XVII, in a valley between 'Ain Karim and 'Ain el-Ḥabîs,[1] about a couple of miles west of the former place. No notice of it is to be found in the *Memoirs*.

[1] عين الحبيس, "the spring of the hermit," but on the map simply marked El-Ḥabs, الحبس, "the prison."

The water rises in a spring, in the heart of the rock at the foot of the hill, on the east side of the valley. Probably it originally escaped by a fissure; this has been artificially enlarged to the dimensions of a tunnel, not unlike the great Siloam aqueduct in appearance. This tunnel I was able to measure for 37 feet: at this distance from the mouth the floor drops suddenly, and the water,



for the last 12 feet or so, is too deep to wade through. The total length of the tunnel is thus about 50 feet. Its height inside is about 4 feet and its breadth 2 feet; these dimensions are suddenly increased near the entrance, where there is an arch built up. A branch tunnel runs southward from about the middle of the main tunnel, 45 feet long, and of about the same average cross-dimensions as the main tunnel, except at the inner end, where the height drops to about 2 feet. This branch tunnel probably conducted

water from a now dry second spring: no water runs along it, and the floor is covered with damp mud. All the water rises in the deep part, at the inner end of the main tunnel. It trickles into a large, irregular, open pool, with a maximum diameter of about 30 feet, and about 10 feet deep. This pool is constructed of masonry covered with cement. The floor of the pool is covered with sandy mud. Some irregular steps in the north-west corner lead down into the pool. A peculiar semi-circular platform has been made in the wall of the pool just south of these steps, and beside them are the usual stone troughs for watering cattle, &c.

When not in use the water runs in a channel across the muddy floor of the pool, and escapes under the bottom step into a built-up drain, 72 feet long, 4 feet high, and 2 feet across (these are the maximum dimensions; in one or two places the drain is almost impassably narrow, and at the mouth it is not more than 2 feet high for the last 6 feet of its length). This drain is constructed of unmortared stones, with cover-slabs for the roof. When water is required for cattle, washing clothes, &c., a pad of cloth is squeezed under the step to dam the exit; the water then slowly rises to the height of the bottom step, which lies across the entrance to the drain. It cannot rise higher, for it runs over the bottom step into the drain.

I owe thanks to Miss G. Dickson for assisting me in the not very easy task of examining and measuring this pool and its associated tunnels and drain.

IX.—A Peculiar Rock-Cutting in the Kedron Valley.

A singular rock-cutting (photographs and a plan of which are sent), will be found by the west side of a road descending from the main road to Bethany into the north end of the Kedron Valley, near to the north-east corner of the city. The rock bearing it is a flat outcrop, 10 feet long, 7 feet across, and 1 foot 3 inches in maximum height above the ground. The cutting consists of a rectangular sinking, 1 foot 7½ inches long, 7 inches across, and 3 to 4 inches deep below the original surface of the rock, with a reveal for a cover-slab rather less than 2 inches deep running round three sides. This reveal is 2 inches wide on the eastern and southern, 6 inches on the western side. Around the sinking is a water-channel to conduct rain away, and prevent its penetrating

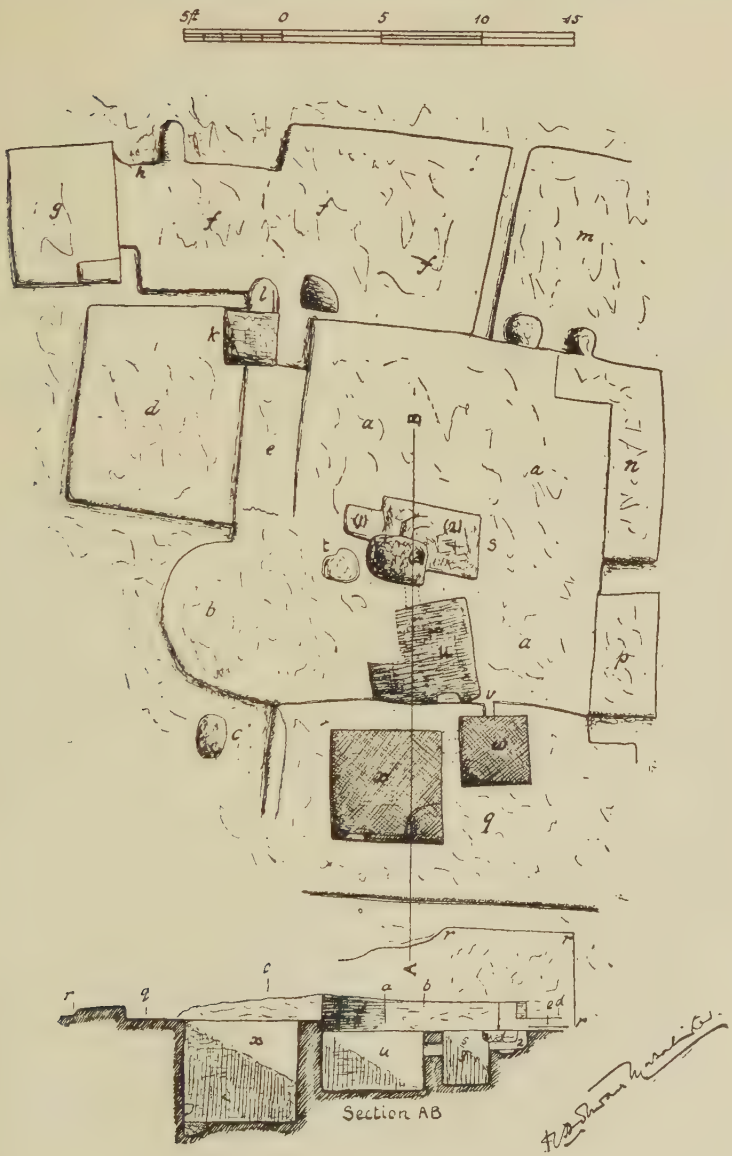
into the sinking. Obviously some object was to be deposited and covered up, and rain-water was to be kept out—either to prevent the object itself from being injured, or to keep the cement with which the cross-slab was, perhaps, secured from being loosened. The only guess I can frame—not wholly satisfactory—is suggested by the resemblance of the cutting to a miniature tomb, and by its position in a valley full of rock-tombs, namely, that it was formed for receiving the body of a prematurely-born infant. In exploring Khurbet el-'Ain, near Tell ej-Judeideh, I found a miniature tomb-chamber, with three tiny arcosolia (of which a plan and section will appear in the forthcoming *Memoir* of the recent excavations). This probably was for a similar purpose. Children's graves are a common adjunct of the tombs round Beit Jibrîn, but are extremely rare near Jerusalem; this adds to the interest of the Kedron Valley example, if the explanation of its purpose here suggested be correct.

X.—A Rock-cut Press near Jerusalem.

In the garden known as "Abraham's Vineyard," on the north-west side of Jerusalem, is a rock-cut press for the extraction of wine or olive oil, a plan (*see* p. 249) of which is here given. It is probably the finest work of its kind in the neighbourhood of the city, and it is of sufficient interest and extent to merit special attention.[1]

[1] [A full account of this press will appear in the following number of the *Quarterly Statement*.—Ed.]

ROCK-CUT PRESS NEAR JERUSALEM



RESULTS OF METEOROLOGICAL OBSERVATIONS TAKEN AT JERUSALEM IN THE YEAR 1901.

By James Glaisher, Esq., F.R.S.

The numbers in column 1 of this table show the highest reading of the barometer in each month; of these the highest, as usual, are in the winter, and the lowest in the summer months; the maximum for the year was 27·722 inches, in January, and the next in order 27·706 inches, in December. The highest reading in the preceding 40 years—viz., 1861 to 1900 inclusive, was 27·816 inches, in December, 1879, and the next in order 27·800 inches, in November, 1870.

In column 2 the lowest reading of the barometer in each month is shown; the minimum for the year was 27·184 inches, in January, and the next in order 27·210 inches, in July. The lowest reading in the preceding 40 years was 26·860 inches, in March, 1898, and the next in order 26·970 inches, in March, 1896.

The numbers in the 3rd column show the extreme range of readings in each month; the smallest was 0·122 inch, in September, and the next in order 0·164 inch, in August; the largest was 0·538 inch, in January, and the next in order 0·481 inch, in December. The mean monthly range for the year was 0·266 inch. The mean for the preceding 40 years was 0·312 inch.

The range of barometer readings in the year was 0·538 inch. The largest range in the preceding 40 years was 0·935 inch, in 1898, and the smallest 0·491 inch, in 1883.

The numbers in the 4th column show the mean monthly pressure of the atmosphere; the highest was 27·558 inches, in December, and the next in order 27·529 inches in November; the lowest was 27·301 inches, in July, and the next in order 27·320 inches, in August. The yearly mean pressure was 27·436 inches. The highest mean yearly pressure in the preceding 40 years was 27·442 inches, in 1863, and the lowest 27·357 inches, in 1894. The mean yearly pressure for the 40 years was 27·390 inches.

The temperature of the air reached 91°·5 on March 31st. In the preceding 19 years the earliest day in the year the temperature was 90° was on March 25th, in year 1888; in April it reached or exceeded 90° on 2 days; in May, on 1 day; in June, on 7 days; in July, on 8 days; in August, on 9 days; and in September, on 1 day—viz.,

(*To face p.* 250.)

MONTHLY METEOROLOGICAL TABLE.

Deduced from observations taken at Jerusalem, by ADOLPH DATZI, in a garden, well within the city, about 2,500 feet above the level of the Mediterranean Sea, open on all sides.
Latitude, 31° 46′ 40″ N.; Longitude, 35° 13′ 30″ E.

Months.	Pressure of atmosphere—corrected to 32° Fahrenheit.				Temperature of the air.							9 a.m.								Wind. Relative proportions of.								Mean amount of cloud.	Rain.	
												Mean reading.			Vapour.															
	Highest.	Lowest.	Range.	Mean.	Highest.	Lowest.	Range.	Mean of all highest.	Mean of all lowest.	Mean daily range.	Mean.	Dry bulb.	Wet bulb.	Dew point.	Elastic force of.	Weight in a cubic foot of air.	Additional weight required for saturation.	Degree of humidity.	Weight of a cubic foot of air.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Mean amount of cloud.	Number of days on which it fell.	Amount collected.
1901.	in.	in.	in.	in.	°	°	°	°	°	°	°	°	°	°	in.	grs.	grs.	°	grs.										in.
January	27·722	27·184	0·538	27·447	60·0	31·0	29·0	50·2	39·2	11·0	44·7	45·6	44·3	42·8	·276	3·1	0·4	90	503	1	5	1	5	1	6	3	9	4·5	11	7·42
February	27·668	27·355	0·313	27·526	77·5	43·0	34·5	65·1	49·3	15·8	57·2	58·8	51·5	45·0	·300	3·4	2·2	60	489	0	7	3	1	0	0	2	15	2·9	3	0·15
March	27·592	27·318	0·274	27·478	91·5	42·0	49·5	68·7	51·3	17·4	60·0	60·6	53·9	47·9	·336	3·8	2·2	63	489	0	3	1	0	0	0	10	17	3·4	4	1·24
April	27·531	27·294	0·237	27·412	93·5	44·0	49·5	72·7	53·1	19·6	62·9	65·3	55·9	48·1	·337	3·7	3·1	55	483	0	5	0	1	0	0	4	20	3·8	4	0·23
May	27·504	27·226	0·278	27·378	90·0	48·0	42·0	74·2	55·0	19·2	64·6	67·9	59·0	52·0	·388	4·2	3·3	56	480	0	1	0	1	0	2	4	23	3·6	4	0·99
June	27·507	27·326	0·181	27·390	97·5	57·6	40·5	84·9	63·3	21·6	74·4	77·7	64·9	56·2	·450	4·8	5·4	47	471	0	1	0	1	0	0	4	24	1·4	0	0·00
July	27·403	27·210	0·193	27·301	96·0	60·0	36·0	86·1	66·7	19·4	77·4	80·2	66·9	57·1	·478	5·1	5·9	46	467	0	0	0	0	0	1	9	21	1·0	0	0·00
August	27·410	27·246	0·164	27·320	98·0	62·0	36·0	86·1	65·8	20·3	76·0	79·1	70·4	64·4	·605	6·5	4·1	60	468	3	0	0	0	0	0	12	16	2·2	0	0·00
September	27·483	27·361	0·122	27·413	94·0	60·0	34·0	83·3	62·8	20·5	73·0	76·2	69·7	65·0	·611	6·6	3·1	69	472	0	0	0	0	0	0	8	22	1·7	0	0·00
October	27·579	27·393	0·186	27·484	86·5	56·0	30·5	78·0	60·5	17·5	69·2	72·3	66·7	62·5	·567	6·1	2·5	71	477	2	7	5	1	1	2	3	10	3·3	2	0·28
November	27·629	27·400	0·229	27·529	86·0	48·0	36·0	67·4	53·9	13·5	60·6	63·4	59·0	55·3	·438	4·9	1·6	75	486	0	4	2	2	0	5	4	13	5·1	8	1·69
December	27·706	27·225	0·481	27·558	70·0	39·0	31·0	60·3	47·9	12·4	54·1	55·6	51·6	47·8	·335	3·8	1·2	76	495	0	7	7	0	1	5	3	8	3·8	4	5·42
Means	27·561	27·295	0 266	27·436	86·7	49·2	37·5	73·1	55·7	17·4	64·4	66·9	59·5	53·7	·427	4·7	2·9	64	482	sum. 6	sum. 40	sum. 19	sum. 12	sum. 3	sum. 21	sum. 66	sum. 198	mean. 3·1	sum. 40	sum. 17·42
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

the 19th—and this was the last day in the year of a temperature as high as 90°. In the preceding 19 years the latest day in the year this temperature reached 90° was on October 23rd, in both 1887 and 1898. The temperature reached or exceeded 90° on 29 days during the year. In the year 1898 the number of days of this high temperature was 12, and in 1887 was 73, the average for the 19 years was 34. The highest temperature in the year was 98° on August 30th; the highest in the preceding 19 years—viz., 1882 to 1900—was 108°·0, in June, 1894.

The temperature of the air was as low or lower than 40°, in January, on 15 nights, and in December, on 3 nights. Thus the temperature was as low or lower than 40° on only 18 nights during the year. In the year 1900 the number of nights of this low temperature was 18, and in 1894 was 113; the average of the 19 years was 53. The lowest temperature in the year was 31°, on January 18th. The lowest in the preceding 19 years was 25°, which occurred on two nights—viz., December 31st, 1897, and January 1st, 1898.

The highest temperature of the air in each month is shown in column 5. In January it was 60°·0, being 0°·1 above the mean of the 19 high day temperatures in January. The high day temperature was also above its average in February, March, April, June, August, November, and December, and below in the remaining months. The mean for the year was 86°·7, being 3°·0 above the average of 19 years.

The lowest temperature of the air in each month is shown in column 6. In January it was 31°·0, being the lowest in the year, and 0°·5 below the average of the 19 low night temperatures in January. The low night temperature was above its average in every month from February to December. The mean for the year was 49°·2, being 4°·6 above the average of 19 years.

The range of temperature in each month is shown in column 7; these numbers vary from 29°·0, in January, to 49°·5, in both March and April. The mean range for the year was 37°·0, being 2°·1 less than the average of 19 years.

The range of temperature in the year was 67°·0. The largest in the preceding 19 years was 81°·0, in 1894, and the smallest 63°·0, in 1901.

The mean of all the high day temperatures in each month is shown in column 8. The lowest was 50°·2, in January, being 0°·7

below the average; the highest was 86°·1, in both July and August, being 1°·1 below the average in July, and 2°·1 below in August. The mean for the year was 73°·1, or 1°·2 above the average of 19 years.

The mean of all the low night temperatures in each is shown in column 9. The lowest was 39°·2, in January, being 0°·7 above the average; the highest was 66°·7, in July, being 2°·3 above the average. The mean for the year was 55°·7, or 3°·0 above the average of 19 years.

In column 10 the mean daily range of temperature in each month is shown. The smallest was 11°·0, in January, and the next in order 12°·4, in December; the greatest was 21°·6, in June, and the next in order was 20°·5, in September. The mean for the year was 17°·4, being 1°·8 less than the average. The smallest ranges in the preceding 19 years were 9°·3, in January, 1883, and 9°·4, in December, 1897; the greatest were 33°·8, in August, 1886, and 30°·1, in August, 1887. The smallest mean for the year was 16°·3, in 1900, and the greatest 24°·3, in 1886.

The mean temperature of the air, as found from the mean of the maximum and minimum temperatures only, is shown in each month in column 11. The lowest was 44°·7, in January, and the next in order were 54°·1, in December, and 57°·2, in February; the highest was 77°·4, in July, and the next in order were 76°·0, in August, and 74°·4, in June. The mean for the year was 64°·4, being 2°·1 above the average of 19 years. The lowest mean temperatures in the preceding 19 years were 39°·8, in January, 1890, and 41°·1, in January, 1898; the highest were 81°·2, in August, 1890, and 81°·1, in July, 1888. The highest mean for the year was 63°·5, in both 1892 and 1900, and the lowest 60°·0, in 1894.

The numbers in column 12 are the mean readings of a dry-bulb thermometer. If the numbers in column 12 be compared with those in column 11, it will be seen that those in column 12 are a little higher in every month, the difference between the means for the year being 2°·5; the mean difference between the mean temperature of the air and that at 9 a.m. for the 19 years was 3°·1.

For a few days in the winter months the dry and wet bulb thermometers read alike, or nearly so; but in the months from March to August the difference between the readings often exceeded 15°·0, and was as large as 25°·0 on June 23rd.

The numbers in column 13 show the mean monthly readings of

the wet-bulb thermometer. The smallest differences between these and those of the dry-bulb were 1°·3, in January, 4°, in December, and 4°·4, in November; the largest were 13°·3, in July, 12°·8, in June, and 9°·4, in April. The mean for the year was 59°·5, and that of the dry-bulb 66°·9.

The numbers in column 14 are the mean temperature of the dew-point, or that temperature at which the air would be saturated by the quantity of vapour mixed with it. The smallest difference between these numbers and those in column 12 was 2°·8, in January, and the next in order were 7°·8, in December, and 8°·1, in November. The mean temperature of the dew-point for the year was 53°·7; the mean for the 19 years was 50°·1.

The numbers in column 15 show the elastic force of vapour, or the length of a column of mercury in inches corresponding to the pressure of vapour. The smallest was 0·276 inch, in January, and the largest 0·611 inch, in September. The mean for the year was 0·427 inch; the average for the 19 years was 0·375 inch.

In column 16 the weight in grains of the water present in a cubic foot of air is shown. It was as small as 3·1 grains, in January, and as large as 6·6 grains, in September. The mean for the year was 4·7 grains; the average of the 19 years was 4·1 grains.

In column 17 the additional quantity of water required to saturate a cubic foot of air is shown; it was as small as 0·4 grain, in January, and as large as 5·9 grains, in July. The mean for the year was 2·9 grains; the average for the 19 years was 3·3 grains.

The numbers in column 18 show the degree of humidity, saturation being represented by 100; the largest numbers were in January, November, and December; and the smallest were in June and July. The mean for the year was 74; that of the 19 years was 60.

The numbers in column 19 show the weight in grains of a cubic foot of air under its mean atmospheric pressure, temperature, and humidity. The largest number was 503 grains, in January; and the smallest 467 grains, in July. The mean for the year was 482 grains; the average of the 19 years was 483 grains.

The most prevalent winds in January were N.W., N.E., and S.E., and the least prevalent were N., E., and S.; the most prevalent in February was N.W., and the least prevalent were N., S., and S.W.; in March the most prevalent were N.W. and W., and the least were N., S.E., S., and S.W.; in April the most

prevalent was N.W., and the least were N., E., S., and S.W.; in May the most prevalent was N.W., and the least were N., E., and S.; in June the most prevalent was N.W., and the least were N., E., S., and S.W.; in July the most prevalent was N.W., and the least were N., N.E., E., S.E., and S.; in August and September the most prevalent were N.W. and W., and the least were N.E., E., S.E., S., and S.W.; in October the most prevalent were N.W. and N.E., and the least were S.E. and S.; in November the most prevalent was N.W., and the least were N. and S.; and in December the most prevalent were N.W., N.E., and E., and the least were N. and S.E. The most prevalent wind in the year was N.W., which occurred on 198 times, of which 24 were in June, 23 in May, and 22 in September; and the least prevalent wind was S., which occurred on only 3 times during the year—viz., 1 in each of the months of January, October, and December.

The total number of times of each wind in the year are shown in the last line of columns 20 to 27; those winds less in number than the average of the preceding 19 years were :—

N. by 19,
N.E. „ 2,
E. „ 11,
S.E. „ 12,
S. „ 6,
S.W. „ 31,
W. „ 1,

and the N.W. wind was greater in number than the average of 19 years by 81.

The numbers in column 28 show the mean amount of cloud in each month; the month with the smallest amount is July, and the largest November. Of the nimbus or rain cloud there were 8 instances; of the cirrus 2 instances; of the cirro cumulus 81 instances; of the cirro stratus 16 instances; of the cumulus stratus 112 instances; and 146 instances of cloudless skies, of which 23 were in July, 18 in June, and 16 in August.

The largest fall of rain for the month in the year was 7·42 inches, in January, of which 1·60 inch fell on the 18th, 1·50 inch on the 27th, and 1·48 inch on the 1st. The next largest fall for the month was 5·42 inches in December, of which 3·05 inches fell on the 4th, and 1·85 inch on the 3rd. No rain fell from May 18th

(*To face p. 255.*)

Deduced from observations taken at Tiberias, under the direction of

des.

Pressure of atmosphere—corrected to 32° Fahrenheit.

Months.	Highest.	Lowest.	Range.	Mean at 8 a.m.	Mean at 4 p.m.	Lower reading at 4 p.m. than at 8 a.m.	Mean at 8 a.m. and 4 p.m.	Amount collected.
1901.	in.	in.	in.	in.	in.	in.	in.	n.
January	31·170	30·514	0·656	30·800	30·738	0·062	30·769	·43
February	30·963	30·436	0·527	30·804	30·712	0·092	30·758	·10
March	30·926	30·435	0·491	30·729	30·649	0·080	30·689	·39
April	30·763	30·380	0·383	30·617	30·540	0·077	30·579	·21
May	30·762	30·230	0·532	30·548	30·467	0·081	30·507	·90
June	30·648	30·287	0·361	30·520	30·428	0·092	30·474	·00
July	30·494	30·175	0·319	30·387	30·306	0·081	30·347	·00
August	30·513	30·200	0·313	30·403	30·329	0·074	30·366	·00
September	30·602	30·385	0·217	30·550	30·440	0·110	30·495	·00
October	30·778	30·388	0·390	30·638	30·528	0·110	30·583	·00
November	30·889	30·489	0·400	30·727	30·623	0·104	30·675	·61
December	30·988	30·361	0·637	30·792	30·689	0·103	30·740	69
Means	30·791	30·357	0·435	30·626	30·537	0·089	30·582	m. ·33
	1	2	3	4	5	6	7	2

till October 2nd, making a period of 137 consecutive days without rain. The total fall of rain for the year was 17·42 inches, being 9·66 inches below the average of 40 years—viz., 1861 to 1900 inclusive. The number of days on which rain fell was 40, being 15 less than the average.

RESULTS OF METEOROLOGICAL OBSERVATIONS TAKEN AT TIBERIAS IN THE YEAR 1901.

By James Glaisher, Esq., F.R.S.

The numbers in column 1 of this table show the highest reading of the barometer in each month. The highest appear in the winter, and the lowest in the summer months. The maximum for the year was 31·170 inches, in January, and the next in order 30·988 inches, in December.

In column 2, the lowest reading in each month is shown. The minimum for the year was 30·175 inches, in July, and the next in order 30·200 inches, in August.

The range of readings in the year was 0·995 inch. The range in the morning observations was 0·886 inch, being 0·348 inch greater than the range at Jerusalem.

The numbers in the 3rd column show the extreme range of readings in each month. The smallest was 0·217 inch in September, and the next in order was 0·313 inch, in August; the largest was 0·656 inch, in January, and the next in order 0·637 inch, in December.

The numbers in columns 4 and 5 show the mean monthly reading of the barometer at 8 a.m. and 4 p.m., and in column 6 the amount by which the reading at 4 p.m. is lower than at 8 a.m.; the smallest difference between these two readings was 0·074 inch, in August, and the next in order 0·077 inch, in April; the largest was 0·110 inch, in both September and October, and the next in order 0·104 inch, in November. In England, in January, the readings at 8 a.m. and 4 p.m. are practically the same, in all other months the reading at 4 p.m. is lower than at 8 a.m.; the greatest difference is 0·025 inch, in June. The mean for the year at Tiberias was 0·089 inch, being about four times greater than in England.

The numbers in column 7 show the mean monthly pressure of the atmosphere: the highest was 30·769 inches, in January, and the next in order 30·758 inches, in February; the lowest was 30·347 inches, in July, and the next in order 30·366 inches, in August. The mean for the year was 30·582 inches.

The highest temperature of the air in each month is shown in column 8. The first day in the year the temperature reached 90° was on March 27th, and the temperature reached or exceeded 90° on 3 other days in this month; in April on 7 days; in May on 10 days; in June, July, August, and September it reached or exceeded 90° on every day; in October on 19 days; and in November on 2 days; thus the temperature reached or exceeded 90° on 164 days during the year. At Jerusalem the temperature did not reach 90° until March 31st, and there were only 29 days in the year on which the temperature was as high as 90°. At Tiberias the temperature was 104° on March 29th, and reached 100° on 1 other day in this month; in April on 2 days; in May on 2 days; in June on 6 days; in July on 15 days; in August on 14 days; in September on 4 days; and in October on 1 day; thus on 46 days in the year the temperature reached or exceeded 100°. The highest temperature in the year at Tiberias was 108°, on both June 1st and July 8th; at Jerusalem it was 98°, on August 30th.

The lowest temperature of the air in each month is shown in column 9. The lowest in the year was 34°·0, in January, on the 18th, and this was the only night during the year on which the temperature was as low or lower than 40°, the next in order was 41°, on January 17th. At Jerusalem the lowest in the year was 31°, on January 18th; and there were 18 nights during the year at Jerusalem on which the temperature was as low or lower than 40°.

The yearly range of temperature was 74°·0; at Jerusalem it was 67°·0.

The range of temperature in each month is shown in column 10, and these numbers vary from 26°, in December, to 57°, in March. At Jerusalem the range varied from 29°, in January, to 45°·9, in both March and April.

In column 11 the mean of all the high day temperatures in each month is shown. The lowest was 63°·4, in January, being 13°·2 higher than that at Jerusalem, and the next in order were 72°·3, in December, and 75°·4, in February; the highest was 99°·8, in August, and the next in order were 99°·5, in July, and 96°·6, in September.

At Jerusalem the highest were 86°·1, in both July and August, and 84°·9, in June. The mean for the year at Tiberias was 85°·4; at Jerusalem it was 73°·1.

In column 12 the mean of all the low night temperatures in each month is shown. The lowest was 49°·1, in January, and the next in order were 56°·4, in February, and 57°·1, in December; the highest was 78°·1, in August, and the next in order 75°·7, in both July and September. At Jerusalem the lowest were 39°·2, in January, 47°·9, in December, and 49°·3, in February; the highest were 66°·7, in July, 65°·8, in August, and 63°·3, in June. At Tiberias the mean for the year was 65°·5; at Jerusalem it was 55°·7.

In column 13 the mean daily range of temperature is shown in each month. The smallest was 14°·3, in January, and the next in order were 15°·2, in December, and 17°·6, in November; the greatest was 23°·8, in July, and the next in order were 23°·2, in June, and 21°·8, in April. At Jerusalem the smallest were 11°·0, in January, 12°·4, in December, and 13°·5, in November; and the greatest were 21°·6, in June, 20°·5, in September, and 20°·3, in August. At Tiberias the mean daily range for the year was 19°·9; at Jerusalem it was 17°·4.

The mean temperature of the air, as found from the maximum and minimum temperatures only, is shown in each month in column 14. The lowest was 56°·2, in January, and the next in order 64°·7, in December, and 65°·9, in February; the highest was 89°·0, in August, 87°·6, in July, and 86°·2, in September. At Jerusalem the lowest mean temperatures were 44°·7, in January, 54°·1, in December, and 57°·2, in February; the highest were 77°·4, in July, 76°·0, in August, and 74°·1, in June. At Tiberias the mean temperature increased month by month to the maximum in August, then decreased month by month to the end of the year. At Jerusalem the mean temperature increased month by month to the maximum in July, then decreased month by month to the end of the year. At Tiberias the yearly value was 75°·5; at Jerusalem it was 64°·4.

The numbers in the 15th and 16th columns are the mean readings of a dry and wet bulb thermometer, taken daily at 8 a.m. If those in column 15 be compared with those in column 14, it will be seen that those in column 15 were a little higher in March, and a little lower in all other months. The mean reading of the dry-bulb for the year was 73°·3, and that of the mean temperature

75°·5, and therefore the mean temperature of the year may be approximately determined by a single reading of the thermometer taken daily at 8 a.m.

The numbers in the 17th column are the temperature of the dew-point, or that temperature at which the air would be saturated by the quantity of vapour mixed with it. The smallest difference between these numbers and those in column 15 was 12°·3, in January, and the largest 20°·8, in October.

The numbers in column 18 show the elastic force of vapour, or the length of a column of mercury in inches corresponding to the pressure of vapour. The smallest was 0·272 inch, in January, and the largest 0·769 inch, in September.

In column 19 the weight in grains of the water in a cubic foot of air is shown. It was as small as 3°·1 grains in January, and as large as 8°·2 grains in August.

In column 20 the additional quantity of vapour required to saturate a cubic foot of air is shown. It was as small as 1°·8 grains in January, and as large as 5°·3 grains in October.

The numbers in column 21 show the degree of humidity of the air, saturation being represented by 100. The largest number is 63 in both January and November, and the smallest 49 in both March and October.

The numbers in column 22 show the weight in grains of a cubic foot of air, under the mean atmospheric pressure, temperature, and humidity of the air. The largest number was in January, decreasing to the smallest in August, then increasing again to the end of the year.

In columns 23 and 24 are the mean readings of a dry and wet-bulb thermometer taken daily at 4 p.m. By comparing the numbers in column 15 with those in column 23, the increase of temperature from 8 a.m. to 4 p.m. is shown. In March the increase was 7°·1, and in October was as much as 9°·6.

In column 25 the temperature of the dew-point at 4 p.m. is shown. By comparing these numbers with those in column 17, it will be seen that the temperature of the dew-point in the months of January, February, March, April, August, September, October, November, and December was higher than at 8 a.m., and lower than at 8 a.m. in all other months. The numbers in this column are smaller than those in column 23 by 14°·5, in January, increasing to 29°·5, in June, then decreasing to 16°·5, in December.

On several days during the months of April, May, June, July, and August, at 4 p.m., the reading of the dry-bulb thermometer exceeded that of the wet by 20° or more, and on three days—viz., May 1st, June 1st and 15th—was more than 25° in excess of the wet-bulb reading. The temperature of the dew-point on these days is shown by the following table:—

Month and Day.	Reading of		Temperature of Dew-Point.	Temperature of Dew-Point below Dry.
	Dry.	Wet.		
	°	°	°	°
May 1	96·0	70·0	54·8	41·2
June 1	102·0	75·0	62·7	39·3
„ 15	100·0	75·0	60·9	39·1

In column 26 the elastic force of vapour is shown, and by comparing the values with those in the same month at 8 a.m., we find that it was smaller at 4 p.m. in the months of May, June, and July, and larger than at 8 a.m. in the remaining months.

In column 27 the amount of water in a cubic foot of air at 4 p.m. is shown. The amount was less than at 8 a.m. in the months of May, June, and July, of the same value in November, and larger than at 8 a.m. in the remaining months.

In column 28 the amount of water required to saturate a cubic foot of air was as large as 9°·6 grains, in June, and as small as 2°·5 grains, in January.

In column 29 the degree of humidity is shown. The driest months are from April to November, the value for these months varying from 38, in June, to 50, in both August and September.

In column 30 the weight of a cubic foot of air is shown. The smallest was 504 grains, in August, and the largest 545 grains, in January.

In column 31 are given the number of days of rain in each month. The greatest number was 8 in January. The total number in the year was 26. At Jerusalem rain fell on 40 days.

In column 32 the monthly fall of rain is given. The heaviest fall of rain on one day in the months from January to April was 2·32 inches, in January, on the 15th, and the next in order

2·29 inches, on January 16th, and 1·34 inch on the 18th. No rain fell from May 17th till October 5th, making a period of 171 consecutive days without rain. The fall of rain on December 2nd was 2·30 inches, and on the 3rd 1·57 inch fell. The heaviest monthly fall in the year was 8·43 inches in January, and the next in order 4·69 inches in December. The total fall for the year was 15·33 inches. At Jerusalem the total fall for the year was 17·42 inches.

ARCHÆOLOGICAL AND EPIGRAPHIC NOTES ON PALESTINE.

By Professor Clermont-Ganneau, M.I.

17. *The Site of Mêpha'ath.*—Some time ago[1] I endeavoured to point out that the name of the biblical city Mêpha'ath, which had hitherto been sought in vain, had survived to the fourteenth century of our era among the ancient Arab geographers with its old name faithfully preserved under the form *Meifa'a*, a village of el-Belḳa, or Moab. In the course of my discussion I argued that in consequence of this there was every chance that the name, although wanting in our maps, might still be traditionally preserved, and that a careful search in the district of Hesbân might not fail to lead to its re-discovery, and at the same time might determine the exact locality of this Levitical city. Events were not long in proving the justice of my remarks, since, as a matter of fact, I now notice in a short itinerary quite recently published by Dr. Alois Musil,[2] comprising the country of Hesbân and the frontier of Moab, a place-name which appears to me to be the required toponym: *Nêfa'*.[3] The name has merely undergone a slight alteration (N = M) in the mouth of the Bedawin, of which the vulgar dialects of Syria offer us more than one example.[4] It is there,

[1] *Recueil d'Archéologie Orientale*, t. IV, p. 57, *seq.*; compare *Quarterly Statement*, 1902, p. 10.

[2] *Kŭsejr 'Amra und andere Schlœsser œstlich von Moab* (Vienna, 1902), p. 2 of the annexed fly-leaf.

[3] A printer's error, to be corrected into Nêf'a, as explained below, p. 261, note 2.

[4] The change might have been somewhat influenced by a popular etymology tending to associate the place-name in question with the frequently used root

accordingly, that it seems fitting, in my opinion, to localise the *Meifa'a* of the ancient Arab geographers, the *Mefa*[1] of the *Notitia dignitatum Imperii Romani*, the Μηφαάθ of the *Onomasticon*, and finally the biblical Mêpha'ath. Unfortunately Dr. Musil gives no indication respecting the exact position of the place whose name in its then corrupt form had no value for him[2]; we shall not be slow, I hope, now that the importance of the place has been thus made manifest, to be informed upon this point. It will be a valuable datum for the determination of the situation of two other Moabite cities, Jahaz and Kedemoth, which are grouped with Mêpha'ath in Joshua xiii, 18,[3] and have not yet been identified.

18. *El-Kahf er-Rakim and the Cave of the Seven Sleepers.*—Whilst perusing Dr. Musil's very interesting report, I had the pleasure of finding there entire confirmation of another conjecture which I had formerly made.[4] From certain historical, geographical, and archæological considerations, I had proposed to place the scene of the Seven Sleepers, as described in the Coran and in the old Muslim traditions, at el-Kahf, also called er-Rakîm, immediately to the south of 'Ammân. Now, as a matter of fact, Dr. Musil[5] has collected a curious Bedawin legend, to the effect that in one of the rock-cut tombs of the remarkable cemetery in this locality, "once upon a time 90 saints slept for 40 years." This, as he himself has justly recognised, is evidently derived from the

نفع. The root نفع, however, exists in Arabic, and its derivative منيفعة has the same general sense of "height, elevated place." In regard to this last-mentioned point, it is to be noted that, according to Herr Musil, the site of *Néf'a* is of great strategical importance, which agrees very well with the indications in the *Onomasticon* and the *Notitia dignitatum*.

[1] *Mesæ*, to be corrected into *Mefae*, the genitive or dative of *Mefa*.

[2] Since the above was written I have received a letter from Dr. Musil, which fortunately places me in a position to supply this want. The locality in question is situated about one mile east-south-east of the Khareibet es-Sûk on the map of the *Survey of Eastern Palestine*, to the north-east of the supposed Jazer, and hence almost due south of 'Ammân, where the Ordnance survey stopped. *Néfa'* is a misprint for *Néf'a*. It will be noticed that the latter vocalisation lends still more plausibility to my connection of the word with the *Meifa'a* of the Arab geographers, and consequently with the Mêpha'ath of the Bible.

[3] *Cf.* Jeremiah xlviii, 21, where Mêpha'ath again occurs with Jahaz.

[4] *Recueil d'Archéologie Orientale*, t. III, p. 293, *seq.* (§ 54, *El-Kahf et la Caverne des Septs-Dormants*).

[5] Musil, *op. cit.*, p. 14, note 1.

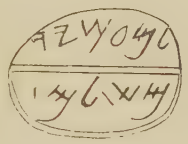
celebrated Christian legend, only the number of persons has been increased, and, by way of compensation, that of the years is diminished. I endorse the geographical identification which Dr. Musil has deduced all the more willingly, as I had already been fortunate enough to establish it without the aid of the testimony of this popular tradition, which now confirms it materially in the most opportune manner.

19. *Discovery of Sykomazon.*—Hitherto one has searched in vain for the site of this episcopal city of *Palæstina* 1ª, whose name appears in the ecclesiastical lists as well as in the subscriptions of divers councils, under the varying, and sometimes even faulty forms, Εὐκωμάζων (George of Cyprus), Συκαμάζων (Hierocles), genitive Συκαμαζόνος, Συκομαζόνος. Its existence had also been confirmed by the Mosaic map of *Mâdeba*. From a private communication which I owe to the kindness of Dr. Musil, I am glad to be able to announce that he has succeeded in discovering this city near the Wâdy Ghazza,[1] faithfully preserved in the Arabic name *Sûḳ Mâzen*. *Sûḳ* (سوق) should correspond to the Aramaic שוק, which, too, has the same meaning ("market"); *Mâzen* is very likely the same name as that of *Mâzin* (مازن), the ancient eponym of Ghassanides. Have we here really a trace of the presence of the famous Arab tribe which ruled in Syria before Islam?

20. *Three New Archaic Israelite Seals.*—I have received one after the other, and from different sources, communications respecting three engraved gems (A, B, C) which enrich our store of seals, so interesting for ancient Hebrew epigraphy. Until recently these little monuments were represented only by rare specimens, but now they seem to multiply little and by little, and, if it continues at this rate, we shall soon foresee the day when they will form a veritable *Corpus* of the highest importance, not only for Hebrew archæology and philology, but often even for biblical exegesis, properly so called.

[1] In a second letter Dr. Musil has been kind enough to give me more precise information respecting the position of Sûḳ Mâzen. It lies to the south-east of Deir el-Belaḥ (south of Gaza), in the neighbourhood of the Wely Sheikh Hamûda of the large English map. The position practically coincides with that ascribed to Συκομάζων on the mosaic map of Mâdeba.

A. After casts communicated by the Committee of the Palestine Exploration Fund, and executed from an impression made by the Rev. J. E. Hanauer, of Jerusalem.[1] The original was found, so we are assured, at Deir Abân, a village situated to the east of Jerusalem. But one must accept with reserve such details regarding the provenience of small objects, which can be carried so easily from place to place. This seal has gone the round of the markets of Jerusalem, and could have passed from hand to hand[2] before finding a buyer.

A. 

Inscription on an Archaic Israelite Seal.

Amethyst, ellipsoid, convex, the greater axis measures about 0·012 m. (*cf.* the measurement of the gem B); whether the stone is pierced I know not.

Upon the convex face, in an elliptical frame, two lines in Phœnician character are very delicately engraved. They are separated by a double stroke, an arrangement which is frequently met with upon seals that are strictly Israelite, and of the older epoch, thus often forming a criterion which helps to distinguish them from similar Phœnician or Aramæan seals. The letters present all the characteristics of the archaic Hebrew writing, and this diagnosis is confirmed by the nature of the proper names, which indubitably belong to the Jewish stock:—

למעשי[הו] משלם

"To Ma'asey[ahû] (son of) Meshullam."

At the end of the first line the *he* and the *waw* are partially destroyed, either by some fracture which the stone may have suffered, or by some imperfection on the impression; enough remains, however, for the restoration to be certain. The name *Ma'aseiah(û)*—"work of Jehovah"—has already been met with upon

[1] [*See* also Mr. Macalister's note, pp. 242, *et seq.*]

[2] From a private communication from Father Sejourné, it appears that the gem has also come under the notice of the Dominican Fathers, who are to publish it in the *Revue Biblique* (*see* the July number, p. 435).

an ancient Israelite seal which I published some while ago.[1] It was widespread among the Jews. In the Bible it is borne by a score of persons, either in the fuller form, such as it is here, or in the more or less abridged forms, מעשיה, מעשי. The name *Meshullam* is not less frequent. In the genealogy of a certain priestly family in 1 Chronicles ix, 12, one finds the names Ma'asai and Meshullam separated by only two generations. Considering the persistence with which certain proper names recur alternately in the same family among the Semites, we may well ask if the possessor of our seal might not have belonged by chance to that of which the chronicler speaks. Granted that the names שלם and משלם seem to have been sometimes confounded, it is possible also to think of other similar comparisons, but it would be rash to push this too far. Finally, I may remark that this seal offers us another example of the frequent habit, which prevailed formerly among the Jews, of omitting the word בן—"son"—before the patronymic. The practice is now well established, though no trace of it is to be found in the Bible.

B. An impression, which I owe to a kind communication from the possessor of the original, E. N. Adler, Esq., through the kind intervention of M. Moïse Schwab, of the *Bibliothèque Nationale*.

B.

ARCHAIC ISRAELITE SEAL (enlarged double the size of the original).

Lapis-lazuli, with spangles of gold, ellipsoid, convex above, flat underneath, in the shape of a scaraboid; the greater axis measures

[1] *Recueil d'Archéologie Orientale*, t. II, p. 27: "To Yaḥmolyahû (son of) Ma'aseyahû." The gem belongs to the Cabinet des Médailles, at Paris.

about 0·012 mm. (*cf.* the measurement of the gem A). The stone was not pierced, consequently it should have been fixed in a metallic mount to form a signet ring. Upon the flat side, in an oval frame, are two lines of Phœnician letters, presenting all the characteristics of Israelite writing, and separated by the usual double stroke :—

לעמדיהו בת שבניהו

"To 'Amdyahû, daughter of Shebanyahû."

The name of the father is well known in the Bible. It has already appeared upon a similar seal, viz., that discovered by Sir Charles Warren in the excavations at Ophel,[1] and in the abridged form שבניו, upon a gem in the Louvre.[2] It is also to be read upon three older stamps on the handles of terra-cotta vases, found in the latest excavations of Tell el-Judeideh, near Beit Jibrîn.[3] These stamps were certainly executed with the help of sigillary gems similar to ours. The name in question is Theophorous, composed of the Divine name Jehovah (Yahû) for the second term, and for the first the element שבן—whether the latter is verbal or otherwise is uncertain, the true etymology is still obscure[4]; in any case it is probably to be connected with the biblical names שבנא and שבנה, which are, perhaps, mere contracted forms.

The difficulty of finding an etymological explanation of this proper name might lead us to ask whether in several, if not in all,

[1] *Cf.* Clermont-Ganneau, *Sceaux et Cachets Israelites, Phéniciens, et Syriens* (Paris, 1883), p. 12, note 1 (Pl. I, No. 3) : "To Haggai, the son of Shebanyahû." The Breslau scholar, Levy (*Siegel und Gemmen*, p. 45, Pl. III, No. 15), incorrectly read : שבניה, with the omission of *waw*, although on the stone this letter is certain.

[2] לשבניו עבד עזיו. "To Shebanyaû, servant of 'Uzzyaû." The legend incorrectly read by de Longpérier, Blau, and later still by Ledrain, should be thus rendered ; *cf.* Levy, *op. cit.*, Hebr. No. 8.

[3] *Quarterly Statement*, 1900, p. 219, Pl. VII, Nos. 2 and 4 : שבניהו (son of 'Azar-yahû) ; No. 6 : (Menahem, son of) ···בני(ש)—in the latter example the reading depends purely upon a hypothetical restoration which I previously proposed in my course of lectures to the Collège de France, in the place of that suggested by Mr. Bliss (*ibid.*, p. 221) : לבנה. Lidzbarski (*Ephem. f. Semit. Epig.*, i, p. 183) had independently reached the same conclusion as myself.

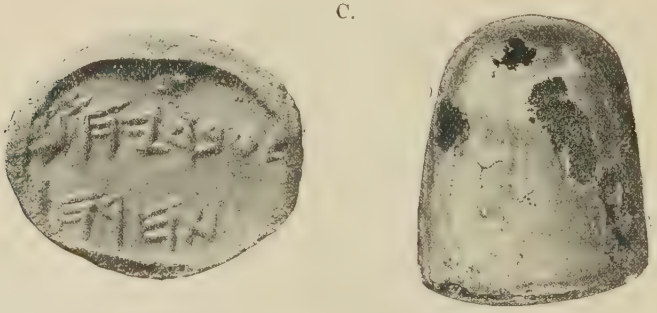
[4] The Editor draws my attention to Nöldeke's ingenious suggestion in the *Encyclopædia Biblica*, col. 3286 (§ 39), viz., to point שָׁבַנְיָה, *Shâbanîyah*, "Yah has brought me back." The vocalisation of the Septuagint transliterations (Σωβενία and Σομνία) may be adduced in favour of this proposal.

of the biblical passages where שבניהו occurs, it ought not to be corrected into שכניהו or שכניה (*Shechanyahû* or *Shechanyah*), another very common name, the formation of which, on the other hand, is perfectly clear—the meanings of the root שכן being satisfactorily established. In fact, the confusion, which is rendered extremely easy by the close resemblance between ב and כ in the square character, actually occurs in at least one instance (*cf.* Nehemiah xii, 3, with xii, 14, and x, 14). But the evidence of our seals explicitly attests the existence, and at the same time the comparative frequency, of the name שבניהו.

The feminine name עמדיהו is quite new. One may, indeed, hesitate respecting the value of the third character, and prefer to see in it a *resh* instead of a *daleth*; עמריהו could then be a name related to that of עמרי *'Omrî*. But the tail of the letter is too short for a *resh*, and appears to be rather that of a *daleth*. The name could, therefore, be regarded as a compound of the Divine name Jehovah (Yahû) with the verbal element עמד in the sense of "stand erect, endure,[1] assist, protect, strengthen," &c. It is even legitimate to ask whether the name should not really be resolved into יהו + (י)עמד, *Immâdî-yahû* "Jehovah (Yah) is with me."[2]

C. A stone, for a communication concerning which I am indebted to the courtesy of my colleague and friend, M. Schlumberger, who acquired it quite recently from a Syrian merchant.

C.



Archaic Israelite Seal (enlarged to double the size of the original).

[1] *Cf.* Psalms cii, 27, אתה תעמד, "Thou dost endure" (*v.* 26, *cf.* R.V.)—addressing the Almighty.

[2] In this case there would be some grounds for the view that עם, in similarly compound biblical proper names, in spite of the Massoretic punctuation, should, on the same analogy, be sometimes explained as the preposition עִם.

Bluish-chalcedony, cone-shaped, octagonal, height 0·017 m., pierced transversely. The form as well as the material of the gem point to the Aramæo-Persian age, in agreement with the criterion which I have previously formulated.[1]

Upon the base there are two lines—*not* separated by the usual double stroke—of Phœnician characters, affecting somewhat an Israelite appearance,[2] but to a less marked degree than in the case of the preceding seals. The letters do not slope, but are almost vertical; the engraving, too, is not so fine.

לעבדיהו [בן] שחרחו[ר]

"To 'Abdyahû, son of Sheḥarḥor."

The *lamed* at the beginning of the first line is slightly damaged, the *beth* at the end has been destroyed by a fracture. The *nun* at the beginning, and the *resh* at the end of the second line have suffered equally from the same fractures, but the restoration which I have made is certain.[3] The very peculiar shape of the *shin* will not be overlooked; the cursive appearance by itself is an indication that the inscription belongs to the Aramæo-Persian period.

The name *'Abdyahû* is thoroughly biblical, and needs no comment. It sufficiently characterises the possessor of our seal as a worshipper (lit., "servant") of Jehovah, and consequently as an Israelite. In addition to this, it has also been met with elsewhere upon other seals of this type.

The name borne by the father is more interesting, and I have already found it upon an Israelite gem in the British Museum which I published long ago,[4] where we read:—

לשחרחר בן צפניהו

"To Sheḥarḥor, son of Ṣephanyahû."

This Sheḥarḥor, to judge from his patronymic, must have been an Israelite, although the name which he himself bears does not occur in the Bible. This name, as I then showed, is to be

[1] *Sceaux et Cachets*, &c., p. 9.

[2] Note, in particular, the shapes of ה, ו, and ב.

[3] Strictly speaking, it might suggest itself to restore a *resh*, in which case we should have the Aramæan word בר, "son." But this I strongly doubt.

[4] *Sceaux et Cachets*, &c., p. 38, No. 41. [Brit. Mus., No. 1032.—Ed.]

explained by the feminine שְׁחַרְחֹרֶת, "brown" or "black," which appears in the famous passage, Canticles i, 5, 6: *nigra sum sed formosa*, &c. It is derived from שחר "brown" by a regular process of reduplication[1] which is found in the formation of adjectives expressing colour, and answers to our names Brown, Braun, Lebrun, &c.

The seal in the British Museum presents essential affinities with the one now under consideration. It, too, is a cone-shaped octagonal stone of chalcedony, the writing is perpendicular and not sloping.[2] These two little relics may very well be almost contemporary, and may belong to the same Aramæo-Persian circle. If to these striking resemblances we add the recurrence in each of a rare proper name of so peculiar a formation, it may not be too rash, perhaps, to suppose that there is a close connection between the two seals, and that in our 'Abdyahû, son of Sheḥarḥor, we may recognise the very son of Sheḥarḥor, son of Ṣephanyahu.

The natural connection with the passage in Canticles above cited appears to me to raise incidentally a most interesting question. I cannot help being struck with the persistence with which the writer there plays upon the words שְׁחוֹרָה and שְׁחַרְחֹרֶת. Granted, on the one hand, that our two seals have established with certainty the existence of an Israelite masculine name *Sheḥarḥor*, we may now ask ourselves whether, perchance, it is not possible that the corresponding feminine form of this adjective may not likewise have been employed as a proper name, and that the true name of the beautiful Shulammite was not *Sheḥarḥoreth*.

21. *Greek Inscriptions from Beersheba.*—(*a*) I have already had occasion to study, a short time ago,[3] a fragment of a Greek inscription discovered at Bîr (or Bîâr) es-Seba', the ancient and famous Beersheba, a fragment of which the editor, Professor Sellin,

[1] Compare אדמדם, "reddish," ירקרק, "greenish." Some philologists, on the other hand, attribute to this reduplicated form an intensive sense: "very black" (instead of "blackish"), "very red," &c. We may compare the analogous principle in the reduplication of the last radical in the ninth and eleventh forms of the Arabic verb, which are employed to express colours (*e.g.*, اصفارّ, اصفرّ, "to be yellow").

[2] Among the palæographic *differences* we may note the separation of the two lines by the double stroke, and the form of the *heth* with two bars instead of three.

[3] *Recueil d'Archéologie Orientale*, t. IV, pp. 162 *seq.*

could make nothing.[1] I showed that it was the *débris* of a piece of Christian epigraphy which was to be restored: . . . *ὑπὲρ ἀναπαύσεως* Σιλουανοῦ . . .—"for the repose of Silvanus . . ." Apropos of this, I reminded my readers of the foundation of an important monastery near to Gerar by the celebrated Silvanus, the so-called "father of the monks," and I discussed the possibility of drawing from this inscription a new argument in favour of a thesis which I had previously put forward,[2] namely, that the situation of Gerar, and, generally speaking, of the region of the *Salton Geraritica*, was to be sought, not, as was ordinarily supposed, at *Umm el-Jerár*, a few miles to the south of Gaza, but very likely in the direction, and perhaps even in the very proximity, of Bîr es-Seba'.

The Committee of the Palestine Exploration Fund have been kind enough to forward me now a new fragment of a Greek inscription from the same place. It presents a close likeness to the preceding. It is, as it seems, a fragment of a sarcophagus; one can still distinguish the remains of a large crown sculptured in relief, in the midst of which there was once, perhaps, a cross. Underneath, upon a wreath, there runs an inscription of one line, of which only a few carefully graven letters remain[3]:—

[. . . *ὑπὲρ ἀναπ*]*αύσεως* Ἰωάννη[*ου* . . .]

"For the repose of John."

This, it will be seen, is the same formula that I had proposed to restore in the other inscription, and perhaps it is possible that here, too, we have an example of the epitaph of some one or other of the cenobites of the monastery of Silvanus. It is earnestly to be wished that researches upon this point could be prosecuted; there would be the chance of discovering other epitaphs more complete than this, which would give us positive evidence respecting the monachal condition of the dead persons, which, indeed, would be of great importance for the solution of the topographical question of Gerar, as I have stated it.

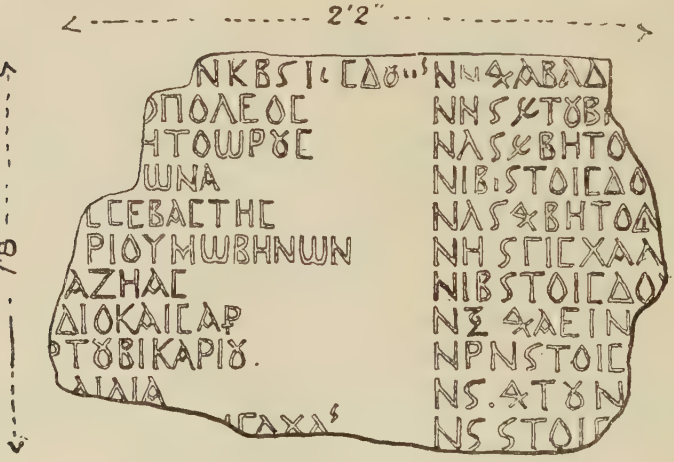
(*b*) The Committee also sent me at the same time another fragment of a Greek inscription, likewise from Bîr es-Seba', a fragment of greater extent, and one which is of exceptional interest. It is a

[1] *Mittheil. u. Nachr. d. Deutsch. Pal. Vereins*, 1900, p. 9.

[2] *Recueil d'Archéologie Orientale*, t. III, pp. 237–240.

[3] *See* p. 234, fig. 8, and *cf.* p. 235 (xii *b*).

broken slab, measuring in its actual state 2 feet 2 inches by 1 foot 8 inches, and bearing an inscription in double columns engraved in characters of the Byzantine epoch. We may presume that the original slab was much greater, and consisted of several columns, the loss of which is infinitely to be regretted, since we have to do with an official document, perhaps even an imperial order which, to judge by what has been preserved to us, would contain valuable details regarding the geography and administrative organisation of Palestine. The decipherment, the reconstruction, and the interpretation of this sadly-mutilated text are very difficult. The transcription and translation which accompany, as well as the



Greek Inscription from Bîâr es-Seba'.

following remarks, can only be regarded as a purely provisional attempt, written with the view to furnish a starting point for discussion, and to formulate, without pretending to solve, certain essential questions.

The eleven lines of column B commence uniformly with N, in which I would recognise an abbreviation of *νομίσματα*, "pieces (of money),"[1] the generic term for gold pieces from the time of Constantine. All these letters are perfectly arranged in a vertical line, and are each followed by various numeral letters indicating the number of pieces, and in addition to this by three particular signs (Ϟ, ϟ, S)

[1] The more usual abbreviation is $\overset{o}{N}$; but examples of N, pure and simple, are known.

used intermittently, the exact function of which I cannot at present explain. The first two have a form hitherto unknown in epigraphy—at least to my knowledge. The third is frequent in the Greek inscriptions of Syria, sometimes as a sign of abbreviation or interpunction, at other times as the conjunction *καὶ*, or finally even, as is usually the case, to indicate the numeral letter, *ϝαῦ* = 6. The problem is particularly complicated by the fact that, in our inscription, this third sign is sometimes indubitably the numeral 6; sometimes, on the other hand, it is a special sign with, at all events, a quite different value, analogous, so far as it goes, to the value of the other two signs, ⅄, ⅂, with which it is here exchanged. The matter appears to be neatly solved by lines 4 and 7,[1] where the number, *ιβ'*, 12, complete in itself, is followed by an S, which here cannot be the figure 6, and similarly in line 11, where *ν(ομίσματα)* is followed by two SS, side by side: the first is necessarily the figure 6, and, consequently, the second, although of identical form, plays a different part.

A comparative and critical examination of these 11 complex groups, composed as they are of numeral letters and signs, has led me to separate them respectively in the manner indicated by the subdivisions II and III, marked for the sake of clearness in column B. I have thus obtained a uniform series (III) in which our three signs thus detached from their context alternate in regular order. As for their meaning, I have not as yet any plausible explanation to propose. The question can be usefully resumed when we have more closely studied the general tenour of the text. I shall then return to the point in question, but I think I may say at this juncture that there is no occasion to decide that these signs are either fractional signs,[2] which would be hardly likely in the case of money, or indications of the metal of the pieces—gold, silver, bronze—since it deals exclusively with gold coins, *νόμισματα* being at this epoch the generic name for gold pieces. Besides, it is not proven that this series of signs, although it follows immediately after the numbers expressing the pieces, refers to these numbers or pieces. It is possible that these signs refer to the words which follow

[1] The same is probably also the case in line 1 of column A, where, as here, the reading of the context is partly conjectural.

[2] In spite of the analogy which might be claimed with the Roman signs:— S = *semis*, and ⅂ = *dimidia sextula*, ii *scrupuli*, *id est siliquæ* xii, *id est medium denarii* (*cf.* Hultsch, *Varia fragm.*, &c., t. II, p. 131, *cf.* p. xxvi).

immediately after (B, col. iv), and which, as I shall now show, really begin fresh subjects, which ought in their turn to be followed by fresh numerical statements referring to them. These statements, to all appearances, were arranged in a missing separate column (C).

At first sight one is tempted to read separately the two columns now preserved: first, the 11 lines of A, and then the 11 lines of B. Natural enough though this may seem, I believe, however, that it would be wrong, and that in spite of the blanks separating the columns, it is necessary to read each line continuously and horizontally, passing each time from A to B. Further, I believe that the totals stated at the beginning of each line in B, col. i-ii, refer to the words which terminate the corresponding lines in col. A. This arrangement is analogous to that which has been observed in other inscriptions similar to ours,[1] and also recalls that which we make use of at the present day in our book-keeping accounts: first the statement of the articles in lines of varying length, then corresponding to this, further on, the figures referring to the same arranged in vertical columns.

The list in A, as well as in B, iv, consists essentially of a series of names of towns in Palestine, to a discussion of which I shall presently turn. In the midst of these, however, there appear here and there the names of certain functionaries.

First of all, I will notice the title of the *Vicarius*, which is to be read on line 9 of col. A. The name is complete, and is perhaps preceded by the preposition [ὑπέ]ρ, "for," or by an abbreviated word terminating in ℙ[2]. The same is perhaps to be restored in line 2, col. B, iv: τοῦ βι . . .[3]. At the epoch to which the palæography of our inscription refers us, the *Vicarius* was, as is

[1] Compare, for example, the great edict of the Emperor Anastasius, discovered at Ptolemais of Cyrenaica (Waddington, No. 1906*a*). The end of the text (lines 60–84) is arranged in a vertical column, straighter even than the body of the inscription itself, and contains an enumeration of various sums conferred upon a series of functionaries. The mention of the parties in question always precedes that of the amounts, and is separated by a blank, sometimes of considerable length. This is uniformly followed by the word νομίσματα, abbreviated to ℕ, and, finally, by numeral letters. It is the same principle as that followed in our inscription; but, unfortunately, there is nothing resembling our three enigmatical signs.

[2] Compare the abbreviation ΔΙΟΚΑΙCAℙ, line 8, col. A.

[3] In this case the question arises whether the sign ⊀, which precedes τοῦ βι . . . should not have a meaning analogous to that of ὑπέρ (*see infra*).

well known, a superior official, governing the diocese,[1] which was subdivided into provinces under the command of dukes, counts, or hegemons. They are, also, some categories of officials which, in my opinion, should be recognised in the frequently-mentioned *τοῖς ἐου . . .* and *τοῖς . . .* (dat. plu.), which appear more or less mutilated in line 1, col. A, and lines 4, 7, 9, and 11 in col. B, iv. At first I thought of restoring everywhere *ἐουκικοί*, *i.e.*, the *duciani* employed in the *τάξις*, the *officium* or office of the duke, but it is possible that it deals rather with different officials, as the case may be. In this respect I am the more perplexed that in line 11, col. A, it would seem that we ought actually to restore ΙΓΔϐΛ'[2] = (*το*)*ῖς ἐουλ*'[3], which excludes the proposed (*το*)*ῖς ἐουκ*(*ικοῖς*). In any case, the character preceding *βικαρίου* is probably a Ρ pure and simple, and one cannot take it as the numeral letter (= 100), seeing that the numbers expressed by numeral letters are invariably followed by one of the three peculiar signs already referred to. Moreover, the immediate continuation of this line begins also with a *τοῖς . . .* (line 11, col. B, iv), which implies the mention of a category of officials other than those which have just been named: "to the . . . six pieces of gold; (and)[4] to the . . , (so many) pieces of gold." It is also possible that it is an official name which lies hidden in the mutilated word, line 10, col. B, iv: *τοῦ ν . . .* One may propose, for example, *ν*[*ουμεραρίου*] "of the paymaster," were it not that analogy would lead us to expect the dative rather than the genitive. Finally, there is perhaps the same in the mutilated word . . . . *ρίου* (line 6, col. A); there remains only the embarrassment of a choice among the numerous official titles terminating in *—arius*, which may have passed into Greek. But, as we shall presently see, the addition of the word *Μωβηνῶν* may suggest a restoration of another kind.

These various officials could only figure here as interested parties.[5] It is not very likely that it is the same with the towns

[1] This will be here the *διοίκησις Ἀσιανή* or *ἀνατολική* (*cf.* George of Cyprus, *Descr. orbis Romani*, p. 41, ed. Gelzer).

[2] Comparing line 1, col. A.

[3] I do not see how to complete the word thus abbreviated; *δούλ*(*οις*) "to slaves," would hardly be in place, and the same criticism applies to *λουδ*(*αρίοις*).

[4] On the hypothesis that the sign Ϛ should have the value *καὶ* (*see infra*).

[5] Compare in this connection the edict of the Emperor Anastasius, quoted above, also the *Novella* of Justinian, cited in the *Notitia dignitatum imperii Romani*, I, p. 161 (ed. Böcking), which regulates the pay and treatment of

enumerated in the documents, the names of which appear for the most part in the genitive. It should refer, rather, to taxes to be collected from these towns, but such a mixture of receipts and expenses thus confusedly arranged would be scarcely natural. Perhaps it may appear preferable to suppose that the towns are designated on account of their being the official residences of the various functionaries. To determine the question it would be necessary to know what precedes and causes this series of genitives. Unfortunately the commencement of the lines in col. A, which might have informed us upon this point, do not exist, and on col. B, where we have the commencement of other lines, the names of the towns are introduced abruptly, so that here we are not able to know the case endings in consequence of the mutilation of the stone.

These local names are, unhappily, for the most part mutilated, either at the commencement (col. A) or at the end (col. B, iv), so that their restoration is often very problematical. Our difficulty is further increased by the fact that we are unable to assert that in this enumeration the document follows any really methodical order, in proceeding according to the regions. Just for the moment one imagines it possible to fix upon groups that are almost homogeneous in this respect, but at a stroke the apparent geographic connection vanishes.

The names, the reading of which may perhaps be considered to be beyond doubt, are those of Sebaste (line 5, col. A), Giscala (line 6, col. B, iv), and Diocæsarea, otherwise known as Sepphoris (line 8, col. A). This brings us to Samaria and Galilee, and invites us to search in the same regions and within these limits for the towns whose names are mutilated. Towards the end (line 10, col. A) it may well be that, in spite of the fractures which injure the bottom of the letters, it is necessary to read the name *Aelia*—that is to say, *Aelia Capitolina*, or Jerusalem.[1] It will be observed

various officials, especially §§ 6 and 7, with reference to Palæstina I^{a} et II^{a}: to the *chartularii*, 9 pieces of gold; to the *primicerius*, 24; to his adjutant, 3; to the *taxis*, 40. Here again the arrangement is to be noticed: the statement of the sums follows that of the interested parties, and is indicated by *ν.*, *νομ.*, or *νομίσματα*, which in every case precede the numeral letters expressing the figure.

[1] Compare the official designation: *ἡ Αἰλία καὶ Ἱεροσόλυμα*, in the *Synecdemus* of Hierocles, p. 41 (ed. Burckhardt); *cf.* George of Cyprus, *op. cit.*, p. 51.

that in this case the name is not in the genitive like those that precede it, but either in the nominative, or rather, perhaps, the dative.

Another name, not of a town but of a people, is quite certain —viz., that of the Moabites (line 6, col. A), whose position between Sebaste and Giscala is assuredly quite unexpected. Μωβηνῶν is preceded by a mutilated word terminating in ... ρίου, which lends itself to so many possible restorations that one cannot venture to decide upon anyone in particular. For example, one could think of (φρου)ρίου, "of the fortress," or better still, of (πραιτω)ρίου, comparing the passage from an inscription of the time of Diocletian, discovered some years ago in the land of Moab itself, which related to the construction of a camp upon the site of B'shêr[1]: *castra prætorii Mobeni*. But it would probably be best to suppose, as I have already indicated above, that this is one of the innumerable official titles in *-arius* which have passed into the Greek terminology of the imperial hierarchy. We have to deal, perhaps, not so much with a place-name, as with some personage having under his civil and military command people of the land of Moab,[2] but possibly residing in Samaria[3] or Galilee. Thus the geographical anomally which I have indicated would entirely disappear.

In line 2, col. A, one hesitates between the various restorations of ... οπόλε(ω)ς, each of which is equally plausible. One may choose between Scythopolis, Eleutheropolis, Nicopolis, &c. The last-mentioned would rather be the one indicated by the context, if we may recognise Beth-horon in the (Βη)τωρορῦς[4] of line 3, col. A. In this case, there would be some semblance of geographical order in the enumeration of the towns, passing successively from Judæa to Samaria, and thence to Galilee. It is true, towards the end (line 10, col. A) it would leap (or return ?) to Jerusalem, but it is to be observed that the grammatical conditions here differ, the name Αἰλία not being in the genitive.

[1] Bliss, *Quarterly Statement*, 1895, p. 225; a better copy by Domaszewski, *Mitt. u. Nachr. d. Deut. Pal. Vereins*, 1897, p. 39.

[2] Perhaps a body of auxiliary recruits from the land of Moab ?

[3] Similarly at the present day the Turkish Governor of the sanjak *Belḳá* has (or at least had a few years ago) his official residence at Nâblus.

[4] *Cf.* Βαιθωρών, the transcription of the name of Beth-horon, in Josephus. Βητοωρορῦς would be the regular form of the genitive, and so we find it in the general analogy of the grammatical construction throughout this column.

I see nothing certain to propose for Αβαδ . . . (line 1, col. B, iv),[1] . . . ωνα (line 4, col. A),[2] or . . . αζηας (line 7, col. A).[3]

In line 3, col. B, iv, one could perhaps restore Βητο[αννααβά] in preference to other restorations equally possible, if we may assume that the name immediately preceding (line 3, col. A) is that of Beth-horon.[4] As for Βητοδ . . . (line 5, col. B, iv), I am tempted to restore Βητοδ[ογανά]. The place-name will be identical to that mentioned upon the Mâdeba mosaic,[5] and corresponds to the name of the modern *Beit Dejan*, between Lydda and Jaffa. But the town is not on that account necessarily the same; the context appears, in fact, to indicate that we are not in Judæa, but Samaria (Sebaste) or Galilee (Giscala). Accordingly, one may see therein either the homonymic locality, *Beit Dejan*, situated about seven miles to the south-east of Nâblus, or the Beth-Dagon of the territory of Asher,[6] which the Talmud mentions as a town of Upper Galilee.[7]

Ἀεαν . . . (line 8, col. B, iv) should be the commencement of a place-name, the first element of which should represent the frequently used *'Ain*, "well." The name of Ἀεαν(εδώρ),[8] *Endor*, commends

[1] The third letter could, strictly speaking, be λ; but a form Αβλδ . . . is phonetically improbable, even if we admit a place-name compounded with the well-known element *Abel* (= אבל) + *d* . . . I do not venture to think of the ancient name of 'Abûd, to the north of Beth-horon.

[2] Here again one is hindered by the very multiplicity of names to which the ending . . . ωνα (which is probably the genitive of a nominative in . . . ωνας) would fit. The field of hypotheses is restricted to the region between Beth-horon and Sebaste, if we may suppose that the geographical order has been followed in the list. But if the preceding name were to be restored *Bêtoannaba*, it would be more legitimate to think of the plain of Σαρωνάς (*Onomasticon*: = Sharon), which extends from Jaffa to Cæsarea.

[3] To judge from its relative position in the list, the place is perhaps to be sought in Galilee, between Giscala and Diocæsarea. It would be very rash to think of [Χορ]αζήας, and treat it as an ancient form of the name *Kerâzeh* (Chorazin).

[4] Compare the Βητοαννααβά of the mosaic map of Mâdeba, situated near Beth-horon and Nicopolis. It will be noticed that our inscription invariably represents the geographical prefix *Beth* by Βητο; similarly also the mosaic (Βητομαρσεά; but Βετομελγέζις is an exception; [Βητ]οδεγανά remains doubtful, as the first three letters are destroyed, but our inscription seems as though it ought to turn the balance in favour of this orthography rather than [Βετ]οδεγανά).

[5] (Βητ)οδεγανά. *See* the preceding note.

[6] Joshua xix, 27.

[7] Neubauer, *Géogr. du Talmud*, p. 231.

[8] *Cf.* the *Onomasticon*: Ἀενδώρ . . . μεγίστη κώμη.

itself by its proximity to the mention of Diocæsarea (line 8, col. A), and by the fact that in this case the enumeration would seem to descend from north to south: Giscala, . . . azea, . . . , Diocæsarea, Endor.

There are certainly many other observations to be made regarding this text which bristles with difficulties, and doubtless I shall have to return to it anon. Whilst awaiting the discussions which will not fail to spring up, and perhaps throw light upon the many still obscure details, I shall conclude this first attempt at a commentary, imperfect though it is, by a few general remarks.

For the elucidation of our inscription, it is necessary to take account of the totals of sums varying according to the articles to which they respectively correspond. In this connection one notes the relatively high figure which follows the mention of the *Vicarius* (line 9)—150 pieces of gold; it agrees well with the high position of this superior official. On the contrary, there is a very sensible difference between 50 and 6 pieces of gold, the sums allowed to the group of officials, evidently of inferior rank, who figure in lines 1 and 2. This difference is so marked, that I have asked myself whether the partly effaced numeral character on line 1, col. B, is really a Ν = 50, in spite of the appearance of the copy, and is not rather a Η = 8.

For the towns the figures, generally speaking, agree with their presumed importance:—Diocæsarea, 60; Nicopolis (?), 56; Bethhoron and Sebaste, each 36; two others, which are unknown, and probably of less rank, have each 12. The modest number (8) in the case of the Moabites would seem to indicate that the reference in this enumeration is to a category of persons rather than of towns. What is most surprising of all is the extreme smallness of the figure referring to Jerusalem (6); a consideration which has the result of casting doubt upon the reading of the name ΑΙΛΙΑ, which is, indeed, to some extent, conjectural; unless one may wish to take account of the very minute point following the numeral letter Ϛ, and may attribute to it the force of the accent which, when placed to the left of numeral letters, has the effect of multiplying them by a thousand. But so high a figure (6,000) compared with the others is wholly disproportionate, and when we bear in mind that the place-name is not in the nominative here, it will be wisest, perhaps, to retain the figure 6, and to suppose that the line

deals simply with an official, or group of officials, associated in some way or other with Jerusalem.[1]

In presenting so mutilated a text, it would be rash to presume to determine exactly what this series of figures refers to. I ask myself, not without some hesitation, if we cannot have here by chance some law concerning the payment of the *annona* (*militaris*), of the *capitum*, &c., and other dues in kind, or some substitute by a tax payable in cash (*adoratio*), referring in turn, according to their standing, to the different military or civil officials entitled to receive these dues.

After examining the details of the text, it seems fitting now to take up the problem which presented itself to us at the beginning, viz., that of the part played by the three enigmatical signs in col. B, iii. I must confess that I do not even yet see a solution, and I shall confine myself to presenting some considerations which may lead to it. It appears to me to be beyond doubt that we should keep them quite clear both from the context, as I have done, and in particular, also, from groups of numeral letters with which they have the appearance at first sight of being confused. They recur regularly, sometimes one, sometimes another, between two consecutive statements, immediately after the amount which concludes the first statement, and before the commencement of the next following.

Three hypotheses are possible :—

1. They stand alone, by themselves, and are to be regarded as signs of interpunction of some kind. The form of one of them (**S**) would rather favour this view, for, as I have already had occasion to remark incidentally, it is frequently met with in Greek inscriptions of Syria, either with this value, or as a symbol of the conjunction *καὶ*. But in this case, what are we to make of the two other signs with which this exchanges, and with which it would seem to have a certain affinity ?

2. They may refer to that which precedes, and not to that which follows. In this case, if one puts aside, as I think one ought, the idea that they are fractional signs, or perhaps signs indicating the pieces of gold, silver, or bronze, one can conceive that they are symbols indicating the nature of the due—the *annona*, *capitum*, &c.—represented by its equivalent in cash.

[1] Compare the same figure (6), referring to some group of undefined officials in line 11.

3. They may refer to that which follows, and not to that which precedes, and thus introduce new statements. In this case, also, the explanation which I have just offered may be strictly applicable. Whatever they may be, if one considers the question from this point of view, it is useful to observe that five times out of six the sign S is followed by the dative (τοῖς); that once out of four ⏄ is followed by the genitive (τοῦ); finally, that once out of twice, ⏅ is similarly followed by a genitive. No doubt these may perhaps be mere coincidences; nevertheless, it is still possible that the signs correspond to certain words which grammatically affect those which follow, as we find to be the actual case. On the other hand, as has been already observed above, a comparison of line 9, col. A, with line 2, col. B, iii, iv, leads one to attribute to the sign ⏅ the value of ὑπέρ, if one may only assume that the restorations, conjectural as they are, have some foundation.

Whatever be the case, I am struck by the fact that in several papyri from Egypt, of an epoch contemporary with that of our inscription, we meet with a sign (⏅), which, it must be admitted, bears a remarkable resemblance to our sign, and certainly appears to have the value ὑπέρ.[1] This being so, is it possible that ⏄ in our inscription is, in like manner, a mark of abbreviation for some particle of the same nature, *e.g.*, διά? On this condition, it would be possible to attribute to our third sign (S) the value of καί, which, in fact, it frequently bears in Greek epigraphy.[2]

In short, it is very difficult, as one sees, to draw from all these considerations any deliberate conclusion. Before this can be done it would be necessary to have before us the stone intact, instead of this shapeless fragment. Nevertheless, we may hope that this and the other questions which have detained us may one day be settled and

[1] Kenyon, *Greek Papyri of the British Museum*, vol. II, p. 333 *seq.*; *cf.* p. 252 (a slightly different form). *Cf.* also Grenfell, Hunt, &c., *Oxyrhyncus Papyri*, vol. I, p. 263 (index). It will be noticed, further, that in a Fayûm papyrus (p. 176, No. 50, line 5) a sign is found with an entirely different form (⏃), regarding the interpretation of which the editors hesitate between ὑπέρ and διά.

[2] I should add that in these same papyri the sign S, in addition to its ordinary value, καί, has sometimes also that of ½, and of δραχμή (money); the two last-mentioned values seem to me to be excluded from our inscription, for the reasons which I have already indicated above.

	A.	B. i.	B. ii.	B. iii.	B. iv.	[C. ?]
1	. . . . . *ν(ομισματα) κβ' S (τοῖ)ς δου? (. . . .),*	*ν(ομίσματα)*	*[ν' ?]*	⅄	*'Αβ[α]δ . . . . . .*	*[ν(ομίσματα) . . . . .*
2	. . . . . *. . . . . ο]πόλεος,*	*ν(ομίσματα)*	*νς'*	⅄	*τοῦ β[ικαρίου?,*	*id.*
3	. . . . . *Βη]τωροῦς,*	*ν(ομίσματα)*	*λς'*	⅄	*Βητο . . . . . ,*	*id.*
4	. . . . . *ωνα.*	*ν(ομίσματα)*	*ιβ' (ı)*	S	*τοῖς δο[υ? (. . . .)?,*	*id . . .*
5	. . . . . *ς Σεβαστῆς,*	*ν(ομίσματα)*	*λς'*	⅄	*Βητοδ . . . . . ,*	*id.*
6	. . . . . *ρίου Μωϑηνῶν,*	*ν(ομίσματα)*	*η'*	S	*Γισχαλ[α? . . . . .*	*id.*
7	. . . . . *αζηας,*	*ν(ομίσματα)*	*ιβ'*	S	*τοῖς δο[υ? (. . . .)?,*	*id.*
8	. . . . . *Διοκαισαρ(είας?),*	*ν(ομίσματα)*	*ξ'*	⅄	*'Αειν . . . . . ,*	*id.*
9	. . . . . *? ὑπὲ]ρ τοῦ βικαρίου,*	*ν(ομίσματα)*	*ρν'*	S	*τοῖς . . . . . ,*	*id.*
10	. . . . . *. . . . . Αἰλία?,*	*ν(ομίσματα)*	*ς' (•)*	⅄	*τοῦ ν . . . . . ,*	*id.*
11	. . . . . *[τοῖς? δουλ (. . . .)?],*	*ν(ομίσματα)*	*ς'*	S	*τοῖς . . . . . ,*	*id.*

A.	B. i.	ii.	iii.	iv.	C.]
1 . . . . . pieces, 22 ; S to the d . . . . s	pieces :	[50 ?]	⅄	Abad . . . . . ,	[pieces ? . . . .
2 . . . . . of . . . opolis (?),	pieces :	56	⅄	of the (*V*)*i*[*carius*] ?,	do.
3 . . . . . of ? [B]êtoôrô (?),	pieces :	36	⅄	[of ?] Bêto . . . ,	do.
4 . . . . . ôna (?),	pieces :	12 (ı)	S	to the d . . . . s,	do.
5 . . . . . of Sebaste,	pieces :	36	⅄	Bêtod . . . . ,	do.
6 . . of the . . . ? ? ? of the Moabites.	pieces :	8	S	Giskala,	do.
7 . . . . . of . . . . azea,	pieces :	12	S	to the d . . . . s,	do.
8 . . . . . [of ?] Diocaesarea,	pieces :	60	⅄	Aein . . . ?,	do.
9 . . . . . [for ?] the *Vicarius*,	pieces :	150	S	to the . . . . s,	do.
10 . . . . . Aelia (?),	pieces :	6 (.)	⅄	of the n . . . . ,	do.
11 . . . . . [to the ?] d . . . . s,	pieces :	6	S	to the . . . . s,	do.

placed beyond all hypothesis. Indeed, it is quite possible that missing fragments of the inscription may be found at Bîr es-Seba'. If, as all the indications go to show, we have to do with an official document, an imperial edict, it is even possible that we may find in other parts of Palestine other copies, more or less well preserved. This was actually the case with the fragments of the edict of Anastasius, which are not without an analogy to our inscription, duplicates of which have been discovered at Bostra and Mothana.[1]

GOLGOTHA AND THE HOLY SEPULCHRE.

By Major-General Sir C. W. Wilson, K.C.B., F.R.S., R.E., &c.

(*Continued from p.* 151).

Before attempting to discuss the evidence available for the determination of the position of Golgotha, it seems desirable to offer some remarks on the topography of Jerusalem at the time of the Crucifixion.

The ancient city was built at the end of a well-defined spur, which, stretching southward for about $1\frac{3}{4}$ miles from the swelling ground that separates the waters of the Dead Sea from those of the Mediterranean, lies between the valley of Hinnom,[2] and that of the Kidron (*see* plan). The latter, known also as the valley of Jehoshaphat, runs eastward, from its source, for $1\frac{1}{2}$ miles, and then, changing direction to the south, sharply separates the long high ridge of Olivet from the lower ground upon which the city stands. The valley of Hinnom, after following a southerly course for $1\frac{1}{4}$ miles, turns eastward, and meets the valley of the Kidron below the south-east corner of the city. The enclosed space may be described as a small, rocky plateau of about 1,000 acres, which falls gradually towards the south-east and terminates in abrupt slopes. The

[1] Waddington, Nos. 1906 and 2033. It is to be noticed that these fragments allude to the limits of the diocese of the Orient, whose *Vicarius* seems to be mentioned in our inscription. Reference is also made (No. 1909, *b*, *c*) to the allowances given to the *duciani* and *scriniarii*, for the *annonæ* and the *capitum*: ὑπὲρ ἀνηωνῶν καὶ καπίτο[υ], ἐκ τοῦ δημοσίου καὶ ἐκ το[ῦ] . . . *Cf.* also the above-mentioned edict of Anastasius.

[2] The names in common use have been adopted for the purposes of this paper, without reference to questions of identification.

enclosing valleys, at first little more than shallow depressions in the ground, become, as they approach the city limits, deep, rocky ravines, and their point of junction is 672 feet below the ground in which they rise. Thus whilst, to the north, there is no material difference between the general level of the little plateau outside the walls and that of the highest parts of the city within them, the ravines on the other three sides fall so steeply, and their character is so trench-like, that they leave upon the beholder the impression of a ditch at the foot of a fortress.[1]

The surface of the plateau is broken by two smaller ravines, which rise north of the city walls. The more important, the Tyropœon, runs southward to join the Kidron at Siloam, and divides the lower portion of the plateau into two spurs of unequal size. The western is high and broad-backed, but its continuity is broken by a short ravine[2] that falls abruptly eastward from the vicinity of the Jaffa Gate, and joins the Tyropœon about 700 yards above Siloam. This ravine formed a natural ditch to the *first* or old wall, and near its head stood Herod's palace which, with its three great towers, formed the acropolis of the Upper City of Josephus. From one of the towers, Hippicus, the wall ran eastward along the south side of the ravine, to the Xystus, and there joining the Council House (near *a* on plan), ended at the western portico of the Temple (Jos., *B.J.*, v, 4, § 2).

The eastern and lower spur is for the most part a narrow ridge of rock, and upon it once stood the Temple and the Castle of Antonia. In three places at least (*b*, *c*, and *d*) its crest line is broken by rock-hewn ditches, and at one, in the north-west corner of the Ḥarâm esh-Sherîf, a large portion of the ridge has been quarried away. One of the ditches (*b*) separates "Jeremiah's Grotto" from the modern city wall; another (*c*) lies beneath the street that leads to St. Stephen's Gate; and the third (*d*) is near the north-west corner of the platform upon which the Dome of the Rock stands.

The second of the small ravines[3] rises in the eastern half of the plateau, and, running through the north-east corner of the Ḥarâm esh-Sherîf, falls into the Kidron a short distance to the north of the

[1] For fuller details of the topography, *see* Smith's *Dictionary of the Bible*, 2nd ed., Art. "Jerusalem," p. 1585 *ff*.

[2] I have called this "Palace Ravine" on the plan, from the proximity of Herod's palace.

[3] Called St. Anne's ravine on the plan.

Golden Gate. In it lie two ancient pools, and on its eastern side now stands the Church of St. Anne.

Those portions of the ravines which lie within the city walls are so filled with *débris* that neither their character nor their true course can now be distinguished: their beds lie in places from 80 feet to 125 feet beneath the surface of to-day. Even the rocky sides of the Kidron and Hinnom valleys, above which the walls of the city rise, present the appearance of steep continuous slopes, broken only by a few terraced gardens. Originally the aspect of the ground must have been very different. At Jerusalem the limestone hills consist, in ascending order, of beds of pink and white indurated chalk, of a thick stratum of soft, easily worked stone (*melekè*), of thin beds of hard reddish and grey stone (*missè*), and of soft white limestone with bands of flints and fossils. The strata have a south-easterly dip, and the hard beds of *missè*, which form the surface of the plateau, pass eastward beneath the soft white limestones of the Mount of Olives. As a result of this formation, the hill-slopes, before the city was built, must have broken down in a series of rock-terraces of varying height and width, which, from the hardness of most of the stone, could have been little encumbered by detritus. How far the original features of the ground had been modified by the time of the Crucifixion it is difficult to say, but there can be little doubt that the ravines were then deep and rocky, and that the terrace-formation was well marked within and without the walls. Beyond the limits of the city the terraces were probably planted with fig, olive, and vine; and the small cliffs, or scarps, in which the limestone beds terminated, were utilised for the construction of rock-hewn tombs. Deeply cut ravines, with terraced sides, are common in the limestone formation of Central and Southern Palestine, and in many places the conjunction of cultivated terrace and scarp with rock-hewn tombs may still be seen. In fitting a site of this nature to the requirements of a capital city, with its public buildings, its streets, its open places, and its fortifications, large masses of rock must have been quarried away in some places, and massive foundations built in others, to obtain the requisite amount of level ground. These rock-clearances and substructures are found in every quarter of the city, and, as their date is in no case certain, it is hazardous to base any theory upon the discovery of isolated rock-scarps and fragments of solid masonry.

According to Josephus (*B.J.*, v, 4, § 2), Jerusalem, when

besieged by Titus, was defended on the north by three walls, and on all other sides by one. The outer or *third* wall on the north was built after the Crucifixion by Agrippa (A.D. 41–43), and need not be considered here. Nearly all authorities agree that the oldest, or *first* wall, ran eastward from the citadel by the Jaffa Gate to a point in the west wall of the Harâm esh-Sherîf at or near Wilson's Arch. The course of the *second* wall, which is still uncertain, will be considered later, when discussing the authenticity or otherwise of the traditional site of Golgotha. Beyond its limits, on the eastern and western spurs, were terraced gardens, and probably a few villas; in the valleys were large reservoirs with aqueducts, which carried their water to the city, and there are some slight indications that the rocky sides of St. Anne's ravine, beneath the north-east corner of the Ḥarâm esh-Sherîf, were honeycombed with rock-hewn tombs. Within the wall, all authorities agree that Herod's palace and gardens covered the ground now occupied by the citadel at the Jaffa Gate, and the Armenian gardens to the south; that the castle of Antonia stood at the north-west angle of the Ḥarâm esh-Sherîf, and that the palace of Agrippa—the old Asmonæan palace, occupied a fine site, on the western spur, facing the Wailing Place of the Jews (*see* plan).

It may be inferred, from the known tendency of main roads and streets to preserve their original direction during many centuries, and through periods of great change,[1] and in this case also from the marked character of the topographical features, that the principal approaches to Jerusalem, and several of the streets, follow very closely the lines of those which existed in the time of Christ and probably earlier. Thus the great highway from the north appears, on reaching the "Tombs of the Kings," to have branched off, as the modern road does, in three directions. The *eastern* branch,[2] following the direction of the St. Anne's ravine, reached the castle of Antonia and the Temple without leaving the eastern spur. The *central* branch ran southward to the Tyropœon Valley, and below the Damascus Gate appears to have forked—one arm (*fff* on plan), now represented by the street el-Wâd, followed the west side of the valley to the Pool of Siloam, where it left the city and went on to the wilderness of Judah:

[1] Nowhere is this more clearly seen than in London.

[2] The roads and streets supposed to follow the direction of those in the time of Christ are shown on the plan by red dotted lines.

the other arm (*g g g*), keeping to a higher level, ran nearly due south through the city, along a line still well marked, and passed out by a gate in the south wall to the Valley of Hinnom. This must have been always one of the principal streets[1] of the city, and on it there must have been a fortified gateway in each of the walls. The *western* branch of the highway from the north avoided the Tyropœon Valley, and keeping to the higher ground of the western spur probably entered the city near Herod's palace.

From the Jordan Valley on the east, one road crossed the ridge of Olivet, and another, followed by Christ on a memorable occasion, wound round the shoulder of the same hill. The approach seems to have been up St. Anne's ravine, but there was, doubtless, a pathway with steps leading directly across the Kidron to the Temple precincts.[2] The approaches from the south could never have been of much importance. The roads from Hebron, Bethlehem, and the western districts appear to have entered the city by a gateway, east of the Jaffa Gate, from which a street (*h h*) ran directly to the Temple precincts near Wilson's Arch.[3] There may also have been posterns in the west wall, giving access to paths to the valley of Hinnom.

The principal streets, running north and south, were connected by cross streets, forming blocks (*insulæ*) which were intersected by narrow winding lanes.[4] The two main streets which cross each other, almost at right angles, probably had a central roadway for chariots, camels, &c., and, on either side, a *trottoir* for foot passengers with colonnades, similar to those of the principal streets of Damascus, Samaria, Gadara, &c. Other streets, possibly representing those of pre-Christian date, are that (*i i*) running from the citadel to the Zion Gate, which perhaps skirted the gardens of Herod's palace; that (*k k*) connecting *i i* and *g g*; and two streets (*l l* and *m*), which possibly led westward from the Temple precincts

[1] This street and that following the direction of el-Wâd are represented with colonnaded sides in the Medeba mosaic.

[2] In Byzantine times a flight of steps led down from the Golden Gate to a bridge over the Kidron, whence there was a path to the Church of the Ascension.

[3] The ancient street was probably some yards to the south, within the line of the first wall.

[4] Josephus (*Ant.*, xiv, 16, § 2; *B.J.*, ii, 14, § 9; v, 8, § 1; vi, 6, § 3). Making allowance for the different topographical conditions, the streets and narrow lanes could not have been very unlike those of Pompei.

to the city. There seems also to have been a road (*n n*) running east and west, which, after the *third* wall was built, possibly connected the castle of Antonia with the tower Psephinus. Whether these streets crossed the Tyropœon and "Palace" ravines by bridges or causeways is unknown. Most of the bazârs (*B.J.*, v, 8, § 1), market places (*B.J.*, i, 13, § 5; ii, 14, § 9, 19, § 4; v, 4, § 1), and important public and private buildings, incidentally mentioned by Josephus, must have been in existence in the time of Christ, and the great Temple of Herod was then in its full glory.

The principal sources of information available for the determination of the site of Golgotha are the Bible; writings of earlier date than the official recovery of Golgotha during the reign of Constantine; the works of Eusebius, Cyril of Jerusalem, and Epiphanius, who must have known the circumstances under which the site was recovered; the histories of Rufinus, Sulpicius Severus, Socrates, Sozomen, Theodoret, Theophanes, and others, who were compilers, and recorded the traditions current at the times they wrote; letters, sermons, and treatises of the Church Fathers; the monograph of Alexander Monachus *De Inventione Crucis*; and early traditions and legends.

For the purposes of topographical identification, it will be sufficient to give the Bible narrative in the following condensed form:—

After the Last Supper, Christ and his disciples left the city, and crossing the brook[1] Kidron, went to the Mount of Olives, to a plot of ground, or garden, called Gethsemane.[2] The spot was one to which Jesus often resorted with his disciples, and it was consequently well known to Judas who betrayed him (Matt. xxvi, 30, 36; Mark xiv, 26, 32; John xviii, 1, 2, 26). Luke, who does not mention Gethsemane, says (xxii, 39, 40) that Jesus "went, as his custom was, unto the Mount of Olives," and that when he was "at the place," perhaps that referred to in xxi, 37, he bade his disciples pray.

From Gethsemane Christ was taken, in the first place, to Annas, the high priest by right, who, after informal inquiry, sent him bound to Caiaphas, the actual high priest—Annas having been deposed. At the house of Caiaphas,[3] possibly his official residence,

[1] R.V., *Margin*, ravine; *Greek*, winter torrent.
[2] *See* Appendix III (1).
[3] *See* Appendix III (2).

where the scribes and elders were assembled, a preliminary investigation was held, and, early the next morning (Luke xxii, 66, "at dawn"), Christ was led away to the place[1] where the Sanhedrin usually held its sittings, and brought before the full Assembly of the chief priests, scribes, and elders of the people (Matt. xxvi, 57, xxvii, 1; Mark xiv, 53, xv, 1; Luke xxii, 54, 66; John xviii, 13, 24). Immediately after his condemnation, whilst it was still early, Christ was taken to the Prætorium (palace), and handed over to Pilate (Matt. xxvii, 2; Mark xv, 1; Luke xxiii, 1; John xviii, 28), that he might be put to death by the Roman power.

It is still uncertain whether the Prætorium of the Gospels[2] was Herod's palace on the western spur, or the Castle of Antonia to the north of the Temple. The former was, almost certainly, the usual residence of Pilate when at Jerusalem, whilst the latter was at once the headquarters of the Roman garrison, and the prison in which important criminals were confined. It is possible that Pilate went to the Castle of Antonia, and even passed the night there, during the critical days of the feast; but it is equally permissible to suppose that Christ was tried at Herod's palace, and was taken, after judgment, to the Antonia, where the two robbers were probably confined, before being led out to crucifixion.

The offence for which Christ was tried and condemned by Pilate was political—sedition against Cæsar[3] (Luke xxiii, 2; Matt. xxvii, 23). The trial, whether it took place at Herod's palace or at the Antonia, was, in accordance with Roman custom, public; and Pilate, probably, had his judgment seat[4] (*βήμα*) erected in the open air, in front of the Prætorium, as his successor, Florus, did some years later (Jos., *B.J.*, ii, 14, § 8). A great crowd had assembled whilst the trial was proceeding,[5] and, apparently followed Christ when he was sent to Herod Antipas[6] (Luke xxiii, 7, *cf.* Acts iv, 27), who was then residing at the Asmonæan Palace[7]

[1] Possibly the Council House mentioned by Josephus (*B.J.*, v, 4, § 2). *See* Appendix III (3).

[2] *See* Appendix III (4).

[3] Many Jews were crucified for this offence by Florus (Jos., *B.J.*, ii, 14, § 9) and by Varus (*Ant.*, xvii, 10, § 10).

[4] *See* Appendix III (4).

[5] This seems to be the meaning of Matt. xxvii, 17.

[6] Son of Herod the Great and Malthace, called Herod the Tetrarch in the New Testament.

[7] The palace was situated to the right of the street leading from Herod's palace to the Temple.

(*see* p. 285). Christ having been condemned by the Roman Governor, was sentenced to be *crucified*. If he had been sentenced to death by the Sanhedrin, according to the Mosaic law, he would have been *stoned* (*Quarterly Statement*, 1902, p. 152, *ff.*); but, the Great Assembly having lost the power of capital punishment (*see* p. 294), Jewish methods of execution had been replaced by Roman. Crucifixion was the punishment reserved by the Romans for those to whom the honour of death by the sword was not granted; and Christ was treated like ordinary highwaymen, robbers, slaves, and persons guilty of sedition. According to common custom execution followed quickly upon condemnation, and he was handed over to a detachment of Roman soldiers, commanded by a centurion, and led away with two robbers [1] to Golgotha, to be crucified (Matt. xxvii, 31–33; Mark xv, 20–22; Luke xxiii, 26–33; John xix, 16–18).

It has been suggested [2] that Pilate "chose Golgotha for the Crucifixion for the purpose of insulting them (the Jews), not in order to fulfil their law." There is, however, no indication of motive on the part of Pilate in the Bible narrative. The natural inference from the simple statements in Matt. xxvii, 26; Mark xv, 15; John xix, 16, that Pilate "delivered" Jesus to the soldiers "to be crucified," and from the more explicit words of Luke xxiii, 25, "but Jesus he delivered up to their will," is that the soldiers of the garrison were allowed to carry out the sentence where they pleased. This view derives some support from the fact that the robbers who were crucified with Christ were men of the class whose execution was, at that period, left in the hands of the soldiers [3] (*Quarterly Statement*, 1902, p. 153). The probability is, then, that the selection of the place of execution was left to the centurion, and that his choice of Golgotha was fortuitous, or dictated by motives of convenience, and was not due to any desire on the part of Pilate to insult the Jews.

[1] The robbers (λῃσταί) crucified with Christ were brigands, freebooters, or outlaws, and must not be confounded with thieves (κλέπται,—so in John x, 8, "thieves and robbers," κλέπται κ. λῃσταί). Thus Josephus calls Hezekias, who was subdued by Herod the Great, and Eleazar, "arch-robbers" (ἀρχιλῃσταί, *B.J.*, ii, 4, § 1; 13, § 2); and those with them and with Simon, "robbers" (*B.J.*, ii, 4, § 2; 13, § 2). In the Bible the word is applied to Barabbas (John xviii, 40).

[2] Canon McColl in *Quarterly Statement*, 1901, p. 283, *Note* 2.

[3] According to Renan (*Vie de Jésus*, 16th ed., p. 428), sentences on those condemned for sedition, as Christ was, were also carried out by the soldiers.

There is an old tradition that the procession to Golgotha passed through the streets of Jerusalem, then thronged with Jews who had come up for the Passover. But whether the tradition refers to the *circumferre*, which the Romans considered an essential part of the punishment, or to a temporary transfer from Herod's palace to the Antonia, as suggested above (p. 288), or to the visit to Herod Antipas, is uncertain. The route of the procession depends upon the site of the Prætorium, which is not certainly known. But modern tradition is clearly at fault in identifying the first part of the *Via Dolorosa* with a street that lies above the ditch which, at the time of the Crucifixion, must have protected the Antonia, and the *second* wall.[1]

Golgotha, the scene of the Crucifixion, was, according to the Bible, in a garden (κῆπος, John xix, 41), outside the city walls[2] ("without the gate," Heb. xiii, 12, 13; *cf.* Matt. xxvii, 32; Mark xv, 20; John xix, 17), and "nigh to the city" (John xix, 20). The spot was near a frequented thoroughfare leading from one of the city gates to the country (Matt. xxvii, 39; Mark xv, 21, 29; Luke xxiii, 26), and was visible from "afar" (Matt. xxvii, 55; Mark xv, 40; Luke xxiii, 49), and presumably from some place whence the chief priests, scribes, and elders could look on, and revile without the risk of incurring ceremonial defilement (Matt. xxvii, 41; Mark xv, 31; *cf.* John xviii, 28). In the garden in which He was crucified there was a "new tomb, wherein was never man yet laid," that belonged to Joseph of Arimathea (Matt. xxvii, 60; Mark xv, 46; Luke xxiii, 53; John xix, 41).

It will be noticed that the Bible narrative gives no indication of the direction of Golgotha with regard to the city,[3] or to any feature connected with it, nor of the position of the gate[4] by which Christ passed out of the city, nor of the place to which the frequented thoroughfare led. Nor is any certain clue afforded by the statements that the spot was "nigh to the city," and visible from

[1] The course of the second wall will be discussed later.

[2] That is, outside the second wall.

[3] Unless, as some writers suppose, a clue is supplied by the words in Heb. xiii, 11, 12. This will be considered later.

[4] Whether Paul had any particular gate in his mind is uncertain. At Rome condemned criminals passed out by the Esquiline Gate, and at Athens by the Charonian Gate. According to a mediæval tradition, Christ bore His cross through the *P. Judiciaria*.

"afar," for the words "nigh" (ἐγγύς),[1] and "afar" (μακρόθεν),[2] as used in the New Testament, appear to have no very definite meaning. It has been suggested[3] that the transfer of the cross to Simon, at or just outside the city gate,[4] may indicate that Golgotha was not near at hand; but this is not very apparent. The transfer of the cross was unusual, but it may well be supposed that the Lord, after all his sufferings, mental and physical, sank beneath the burden,[5] and that the soldiers, impatient of delay, impressed a man, coming from the opposite direction, who met the procession as it left the city.

It would appear then that the only certain facts to be gathered from the Bible narrative are: that Christ was crucified in a garden, or orchard (κῆπος), outside the city, and, in accordance with Roman custom, close to a public thoroughfare. Golgotha was evidently so well known that it was not necessary to define its position more precisely. The garden was most probably a terrace (*see* p. 284) planted with fruit trees, such as the olive, fig, and vine, or with trees that gave a grateful shade; and the mouth of the tomb would naturally be in rock-scarp of the next higher-lying terrace. The accompanying illustration[6] shows clearly the vertical face of a terrace, with the mouths of rock-hewn tombs, and the floor of the next lower-lying terrace forming a garden (κῆπος), on which, in this instance, wheat or barley has been grown. A

[1] John uses the same word to define the relative positions of the tomb and the cross (xix. 42); of Christ, when walking on the lake, and the boat (vi, 19); and of Bethany and Jerusalem (xi, 18). In Acts the Mount of Olives is said to be *nigh* to Jerusalem (i, 12), and Lydda to Joppa (ix, 38). *See also* Luke xix, 11; John iii, 23; vi, 23; xi, 54; Acts xxvii, 8. The word appears to be used as a pleonasm, like μακρόθεν.

[2] A late Greek word and well-known pleonasm. It is used to define the relative positions of Peter and Christ on the way from Gethsemane to the House of Caiaphas (Matt. xxvi, 58; Mark xiv, 54; Luke xxii, 54); of Christ and the fig tree (Mark xi, 13); of the Pharisee and the publican in the Temple (Luke xviii, 13); and of Dives and Lazarus (Luke xvi, 33). *See also* Mark v, 6; viii, 3.

[3] Gautier, in *Quarterly Statement*, 1902, p. 78.

[4] This is the usual explanation of the expression "as they came out" (Matt. xxvii, 32); but the words may refer to the departure of the procession from the Prætorium.

[5] The language of Mark xv, 22, they "bring him," *literally* "bear him," to Golgotha, seems to imply this.

[6] From a photograph by Mr. Macalister, of tombs near the "Tombs of the Judges."

family tomb in a garden is mentioned in connection with the burials of Manasseh and Amon.

The absence of any definite statement in the Bible with regard to the position of Golgotha, has led to much curious speculation since 1738, when Jonas Korte vigorously attacked the authenticity of the traditional site, and gave wider currency to doubts that had previously been expressed. The scene of the Crucifixion has been placed north, south, east, and west of the city: but the more important authorities are now agreed that it must have been some

Tombs with Terrace-Garden in Front.

spot, outside the *second* wall of Josephus, which was situated on the small plateau that lies between the Kidron and Hinnom valleys. Such, according to tradition, was the position of the site upon which Constantine built his great churches,[1] and it is necessary, in the first place, to examine carefully the claims of that site to authenticity. Was its official recovery based upon any certain tradition? Is there anything in its natural features which is not in

[1] It is unnecessary to discuss the theory of Fergusson that the churches were on the eastern hill, for they are clearly shown on the western in the Medeba mosaic.

JERUSALEM.

PALESTINE EXPLORATION FUND.

REFERENCE.

a. Council House.
b, c, d. Rock-hewn ditches.
e. Wailing Place.
f, f, f.
g, g.
h, h.
i, i.
k, k.
l, l.
m.
o, o.
Streets supposed to represent ancient streets.

n, n. Supposed line of road before the third wall was built.

Supposed ancient roads and streets.

Positions assigned to the Second Wall.

accordance with the Bible narrative? Was it outside the *second* wall? These questions must now be considered.

(*To be continued.*)

APPENDIX III.

Places Mentioned in Connection with Our Lord's Passion.

(1) Gethsemane is called by Matthew (xxvi, 36) and Mark (xiv, 32) "a place," or, more accurately, as in R.V. margin, "an enclosed piece of ground" (*χωρίον*)[1]: and by John (xviii, 1) "a garden," or orchard (*κῆπος*).[2] Luke (xxii, 40) uses the indefinite term "the place" (*τόπος*), to signify the spot where what he narrates occurred. No descriptive details are given in the Bible, but the Hebrew name, "an oil press," and the expressions "went in" and "went out" (*εἰσῆλθεν* and *ἐξῆλθεν*, John xviii, 1, 4), seem to indicate that the place was one of those terraces planted with olive trees, which form such a marked feature of the scenery in the hill country of Judah. From the fourth century, possibly from the date of the Empress Helena's visit to Jerusalem, in A.D. 326, Gethsemane has been shown at the foot of the Mount of Olives (*see* plan). Proximity to the Kidron may perhaps be inferred from John xviii, 1, 2, and is considered by Stanley (*Sin. and Pal.*, p. 455) and others, to be an argument in favour of the traditional site. But a comparison of the statements in Luke xxi, 37, and xxii, 39, has led some authorities to believe that the garden was higher up the mount. This view derives some support from the early tradition that Christ taught the Apostles in a cave near the summit of the Mount of Olives. Thus Eusebius (*Dem. Ev.*, vi, 18) mentions a cave, near the top of the hill, where Jesus prayed, and this may be the "sacred cave" over which Constantine built a church (*De Laud. Const.*, ix; whilst he simply describes Gethsemane as an "enclosed piece of ground" at the Mount of Olives where the faithful used to pray (Lagarde, *OS.*[2], 248[18]). The Bordeaux Pilgrim (A.D. 333) saw "a stone at the place (apparently near the traditional Gethsemane) where Judas Iscariot betrayed Christ," and afterwards ascended "to the Mount of Olives, where, before the Passion, the Lord taught his disciples." Cyril (*Cat.* xiii, 38) apparently distinguishes between Gethsemane "where the betrayal happened," and the Mount of Olives "on which they were that night praying." St. Sylvia (A.D. *circ.* 385) seems to connect the "cave in which the Lord taught the Apostles" with the Church of the Ascension

[1] The word *χωρίον* is translated "parcel of ground" in John, iv, 5; "field" (called Akeldama) in Acts i, 18, 19; "land" (of Ananias) in Acts v, 3, 8; and "lands," in the plural, in Acts iv, 34.

[2] The same word is used by John (xix, 41) for the garden in which Christ was crucified and buried.

(*Pilgrimage*, English edition in *P.P.T.S.*, vol. i, pp. 51, 58, 77). Eucherius (*circ.* A.D. 440) mentions two churches on the Mount—one at the place of the Ascension, the other where Christ talked to his disciples (in *P.P.T.S.*, vol. ii, p. 10). The first to distinctly state that Gethsemane was "*at the foot of* the Mount of Olives" is Jerome (*OS.*[2], 130[22]). The general conclusion is that, although the authenticity of the traditional site cannot be proved, it is not impossible or improbable.

(2) The House of Caiaphas (αὐλή in Matt. xxvi, 3, 58; Mark xiv, 54; John xviii, 15; and οἶκος in Luke xxii, 54), with its uncovered courtyard (Matt. xxvi, 69; Mark xiv, 66; Luke xxii, 55), and its porch (πυλών, Matt. xxvi, 71, or προαύλιον,[1] Mark xiv, 68), closed by a door, or gate (θύρα, John xviii, 16, *cf.* the gate of the porch of Mary's house, Acts xii, 13, 14), was perhaps the official residence of the high priest. It was probably not far distant from the Temple and the hall in which the Sanhedrin sat; and it may have been the same place as the house (οἶκος) of Ananias, the high priest, which was, apparently, near the Asmonæan palace, and was destroyed by the insurgents during the tumult that commenced the war with Rome (Jos., *B.J.*, ii, 17, § 6).

In the houses of the wealthy the public and private apartments were built round a paved court, which was entered from the street through a porch, or passage, closed by a heavy door, having a room on one side for the porter and attendants. In some instances the houses had a forecourt and an inner court, and this appears to have been the case in that of Caiaphas. It may be inferred, from a comparison of Matt. xxvi, 57–75; Mark xiv, 53–68; Luke xxii, 54–61; John xviii, 12–27, that Caiaphas and Annas lived in the same house, in which both, doubtless, had their own separate apartments.

(3) The Sanhedrin, or Great Council, at Jerusalem consisted of 70 members—chief priests,[2] scribes, and elders, with the high priest as president. Under the Romans it could try important cases, and pass sentences of death (Matt. v, 22), but they were not valid until confirmed by the Roman procurator (John xviii, 31; Jos., *Ant.* xx, 9, § 1). The Great Council originally sat, on ordinary days, in a stone hall[3] (*lishkath ha-Gazith*) in the inner court, on the south side of the Temple; and on Sabbaths and festivals in the Temple synagogue, in the *chel* between the outer court and the court of the women (Maim., *San.* 3). But 40 years before the destruction of Jerusalem, or, more probably, when Archelaus was deposed, and the first Roman governor was appointed (A.D. 7), the right to inflict capital punishment was withdrawn, and the Sanhedrin

[1] It is uncertain whether this refers to a forecourt or to a porch.

[2] The chief priests included those who had held the office of high priest and had been deposed, and influential members of the families from which the high priests were selected.

[3] According to Tal. Bab. *Yoma*, the hall was in the form of a large basilica. Here alone, according to the old law, sentence of death could be pronounced.

transferred its sittings to "the sheds," or "trade halls."[1] This place may have been in the outer court,[2] or precincts of the Temple, and possibly that which Josephus calls the "Council House" (βουλή), and places between the Xystus, and the western portico of the Temple.[3] The "Council House" must, from the nature of the ground, have been on the Temple Mount, and either within the precincts, or partly within them, and partly on the bridge which connected the Temple with the Xystus,[4] not far from Wilson's Arch (*see* map). The view that the Sanhedrin was sitting in the "Council House" when Christ was brought before it, seems, however, to conflict with the statement in Matt. xxvii, 5, which seems to indicate, though not certainly, that when Judas cast down the pieces of silver, the members of the Sanhedrin were in the *naos*,[5] or sanctuary, which did not include the outer courts or precincts.

(4) The Prætorium was originally the tent of the Prætor in a Roman camp, but the word was afterwards applied to the official residence of the Governor or Procurator of a Roman province. Amongst the Romans it was customary for the governors of provinces to appropriate to their own use the palaces in which the kings and princes had formerly dwelt. Thus in Sicily the Proprætor lived in the castle or palace of Hiero (Cic. *in Ver.* II, v. 12, 30); and at Cæsarea the Procurator occupied Herod's Prætorium (palace) (Acts xxiii, 35, xxv, 23). It is impossible to believe that Pilate, when staying at Jerusalem for the transaction of public business, did not follow the usual custom, and select as his residence the magnificent palace that Herod had built for himself in the Upper City (Jos., *Ant.* xv, 9, § 3; *B.J.* i, 21, § 1, v, 4, § 4). It would have been

[1] Tal. Bab. *Abod. Zar.*, 8 b., f. 8; *et consedit in tabernis*, Lightfoot, *in Matt.* xxvi, 3, p. 370.

[2] The "tables of the money-changers," and the place where people bought and sold (Matt. xxi, 12; Mark xi, 15; Luke xix, 45), must have been in the outer court or in one of the porticoes, possibly near the spot where the Sanhedrin sat.

[3] The *first wall* extended "to the Xystus, and then, joining the Council House, ended at the western portico of the Temple" (*B.J.*, v, 4, § 2). As Schürer remarks (*H.J.P.* II, i, p. 190, *ff.*, Eng. ed.), the Council House must have been on the Temple Mount, as there was nothing between the Temple and the Xystus but a bridge. It could not have been in the upper city, for the Romans destroyed the βουλευτήριον (= βουλή) before they took that part of the city (*B.J.*, vi, 6, § 3). Schürer argues that *lishkath ha-Gazith* means that the hall was so named because it was near the Xystus, and not because it was built of wrought stones, which would hardly be a characteristic feature.

[4] *B.J.*, ii, 16, § 3. This was one of the principal approaches to the Temple, and the point at which it entered would be a convenient place for the money-changers, &c.

[5] The word *naos* (ναός), usually applied to the actual Temple, here evidently includes the inner court which is generally considered to have formed part of the *hieron*, or Temple with its courts. Possibly *naos* may not accurately represent the original Aramaic of Matthew.

derogatory to the dignity of an official of his rank to live in a building of less importance, and his neglect to occupy it would have been regarded, in an Oriental country, as a sign of weakness. His occupation of the palace is implied by the statement that he insulted the Jews by hanging inscribed shields in it (*ἐν τοῖς Ἡρώδου βασιλείοις*, Philo, *Leg. ad Gaium*, § 38); and by the presence of his wife, who he would not have lodged in the Antonia, which was inferior as a residence, and was the head-quarters of the legion that garrisoned Jerusalem (*Ant.* xv, 11, §§ 4, 7; *B.J.* v, 5, § 8). It may also be remarked that the Antonia is called "the barracks" (*παρεμβολή*, R.V. "castle"), and not the Prætorium, in the only passages in the Bible that allude to it (Acts xxi, 34, 37 : xxii, 24; xxiii, 10, 16, 32); and that there is no certain instance of the application of the word prætorium to a camp or barracks. At a later date (A.D. 66) Gessius Florus, Pilate's successor, certainly occupied Herod's palace, and "erected a judgment seat (*bema*, *βῆμα*) in front of it, and took his seat thereon : then the chief priests, and men of influence, ... came up and stood by the judgment seat" (Jos., *B.J.* ii, 14, § 8). From this interesting passage it would appear that there was an open space in front of the palace, possibly adjoining, or opening on to the "upper agora" of Josephus, where the governor sat to administer justice. Probably the *bema* was usually set up on the same spot,[1] and if the palace was the Prætorium, that spot may have been a small raised platform, with a tessellated or mosaic pavement, which was called in Aramaic *Gabbatha*, and in Greek *Lithostroton*.

Although the evidence in favour of the identification of the Prætorium with Herod's palace is very strong, it must not be forgotten that a tradition, at least as old as the fourth century, places "the house or Prætorium of Pilate" to the east of the Church of the Holy Sepulchre. The existence of this tradition,[2] at a time when the towers of Herod's palace were standing, and the Antonia had long disappeared, certainly points to a very early belief that the latter place was connected in some way or other with the events which led up to the Crucifixion. Cumanus,

[1] On one occasion, at least, Pilate had the *bema* placed in the great stadium at Jerusalem (Jos., *B.J.*, ii, 9, § 3).

[2] The Bordeaux Pilgrim (*Itin.*, A.D. 333), passing northward along the main street of Jerusalem, had the basilica of Constantine on his left hand, and on his right, "below in the valley," the ruins of "the house or prætorium of Pontius Pilate." Possibly Cyril (*Cat.* xiii, 39) alludes to the same place as the "prætorium of Pilate now laid waste." Peter, the Iberian (Georgian), Bishop of Maiumas in the 5th century, on leaving Golgotha "went down to the church, which is called that of Pilate, and thence to that of the Paralytic," on his way to Gethsemane, and so places the Church of Pilate between the Sepulchre and the Church of St. Anne (*Pierre l'Ibérien*, in "Revue de l'Orient Latin," iii, p. 382). The 6th century tradition was that the Church of St. Sophia occupied the site of Pilate's house, or the Prætorium (*Brev. de Hierosol.*; Theodosius, *T. S.*, § 7; Ant. Mart., *Itin.*, § 23); and, according to

at the time of the feast of unleavened bread, strongly reinforced the garrison in the Antonia, and was himself either in the castle or on the porticoes of the Temple (Jos., *Ant.* xx. 5, § 3 ; *B.J.* ii 12, § 1). Pilate may have done the same, and have set up his *bema* on the open space between the Antonia and the Temple. A not impossible explanation is that Christ, after the trial and judgment at Herod's palace, was handed over to the soldiers for execution ; and that they, in the first place, led him through the streets to the Antonia, and then, after receiving the two robbers from the commandant, passed on to Golgotha.

With our present knowledge, the conclusion must be that the position of the Prætorium of the Gospels cannot be certainly ascertained. An identification with Herod's palace is supported by Alford, Edersheim, Ewald, Keim, Meyer, Schürer, Tobler, Wieseler, Winer, &c. ; whilst the Antonia is preferred by Caspari, Clermont-Ganneau, Krafft, Langen, Tischendorf, Weiss, Westcott, &c.

'AIN EL-FESHKHAH, EL-ḤAJAR EL-AṢBAḤ, AND KHURBET ḲUMRÂN.

By Dr. E. W. G. Masterman.

(*Continued from p.* 167.)

March 21*st*, 1902. — *Rise of Dead Sea level* since February 19th, 3·5 inches.

Rise of 'Ain el-Feshkhah level since February 19th, 2·5 inches.

Rainfall at Jerusalem since February 19th, 2·68 inches.

Temperatures, 7.30 *to* 9 A.M. — Air, 70° ; Dead Sea, 68° ; 'Ain el-Feshkhah, 74° ; 'Ain el-Mabneyeh, 80·5°.

Weather.—Fine ; few clouds ; light N.W. wind till about 8 A.M., then S.E., increasing to a breeze ; in afternoon, strong W. breeze with showers.

State of Dead Sea.—Small waves, not crested with foam ; some haze over the lake to S.E.

White Line.—Two white lines visible at 7 A.M., the outer one passing straight from direction of north shore, about half-way between 'Ain el-Feshkhah and mouth of Jordan (the north end itself being invisible), until directly to the east of 'Ain el-Feshkhah, when it made a bend

M. Clermont-Ganneau, this church, which succeeded the Church of Pilate, was built on the site of the Castle Antonia, where the Turkish barracks now stand (*Rec. d'Arch. Or.*, ii, 154 ; iii, 228, 229). Other authorities, however, place the Church of St. Sophia on the site now occupied by the Dome of the Rock. There is no certain evidence on this point, and a discussion of the question would occupy too much space.

towards the bay, and then passed down the lake in a series of windings. The inner line was in the usual position of this line at the 'Ain. Opposite the 'Ain it was much bent; it could not be made out beyond Râs el-Feshkhah. About 8.30 (after the wind changed to S.E.) the inner line

SKETCH FROM SPOT NEAR KHURBET KUMRAN, LOOKING SOUTH.

was coming inshore rapidly, being much broken up. The outer line was also broken up. Professor Libbey, who was at the shore of the Dead Sea much further east, reported that when he got there a little later the whole north shore was covered with foam.

Remarks.—The plain of Jericho still covered with flowers, chiefly yellow compositæ, in patches, but all the herbage a good deal withered, no longer bright green.

A small herd of camels, with young, found between Wâdy Dabr and Ḥajar el-Aṣbaḥ. Several hundred sheep were gathered at the Pool of 'Ain el-Feshkhah for washing. A dozen Bedawin of the *Ya'âmereh* tribe were engaged in the process, most of them stark naked in the water. They washed the fleeces thoroughly with their hands, but without soap. The whole process occupied a little over an hour.

I had further confirmation from the Jericho man who accompanied me regarding the true *Ḥajar el-Aṣbaḥ* (*Quarterly Statement*, 1902, p. 161). He identified it without any leading from me, and said everyone knew that was the one. He said no one who knew anything about it would identify any other.

A great many storks observed on the Jericho road as far up as "The Apostles' Fountain." Vultures, hawks, storks, and a kingfisher at *'Ain Mabneyeh*. This name has much puzzled me, as it means a fountain *built up*. On this visit I found to the north, close to and on a little higher ground than the spring I have described as 'Ain Mabneyeh, another spring of considerable volume, which rises in an enclosure about 30 feet square, with walls about 4 feet thick, and now scarcely at all above the level of the ground: rough masonry. The enclosed part has evidently once formed a pool for some purpose, either for a bath or a fishpond, but it is now almost full of earth: the water rises into two or three deep holes among the rubbish, and flows out to the north-east to join the water of the other spring and form the Seil Mabneyeh. The two springs are not 100 yards apart, but this "built up" spring was hidden before by reeds.

April 26th, 1902.—*Rise or fall* of Dead Sea since March 21st, *nil*.

Rise of 'Ain el-Feshkhah since March 21st, 0·5 inch.

Rainfall at Jerusalem since March 21st, 1·69 inches.

Temperature, 6 30 A.M.—Air, 77° ; 'Ain el-Mabneyeh, 80·5°.

Weather.—Fine : sky clear above ; misty over sea to east, and specially south-east, where mountains were gradually obscured in mist. Very gentle breeze north-west and west-north-west.

State of Dead Sea.—Smooth. From a distance of about a mile the sea west of the white line looked clear and glassy, reflecting brightness of the sky ; east of the white line there was a dull colour through tiny waves. About 8.15 a.m. the mist to east had cleared, and both sea and mountains showed lovely shades of blue.

White Line.—Visible, but faint and irregular. At 6.30 it appeared to end a little north-east of 'Ain el-Feshkhah district ; about half a mile from the shore opposite Râs el-Feshkhah it disappeared into distance down the lake. At 8 a.m. it was nearer shore : the north end had come in shore : had flattened out so as to look like a broad line of white scum on the surface, within a stone's throw of the shore, along most of the 'Ain el-Feshkhah district. Further along the north shore, between the 'Ain el-Feshkhah district and the mouth of Jordan, but much nearer the former, was another irregular line of foam disposed in an irregular circle —ill defined.

Remarks.—Not a soul was seen from Jericho to the 'Ain and back again. No flocks seen. Many storks ; a jackal ; half a dozen ibex on Jericho plain, near Wady Dabr ; a coney, seen at "Observation Rock."

MISCELLANEOUS NOTES MADE DURING A JOURNEY EAST AND WEST OF JORDAN.

By Dr. E. W. G. MASTERMAN.

1. I made a squeeze of a Greek inscription at Nâblus, which Mr. Macalister is sending with some notes (*see* pp. 240, *et seq.*).

2. The harvest—barley and wheat—promises to be unusually good this year. Wherever we went through the highland west of the Jordan and down through the Ḥaurân and Jebel 'Ajlûn the crops were wonderful. I never saw such fertility. Wildflowers, too, are unusually plentiful. The rainfall, though not great, has been well distributed. I do not know whether it is directly connected with this, but all over the land *storks* are extraordinarily common. On the Jericho road they could be seen all the way down from "The Apostles' Fountain." We were seldom out of sight of them east of Jordan. At Damascus it was mentioned to me that their numbers were most unusual.

3. The dryness of this and the last season is shown in many directions. For many weeks past there has not been a drop of water in "Jacob's Well;" when I visited it at the same time of year in 1893 there was quite a quantity. The *Merj el-Ghuruk* near *Sânûr*, which was a small lake in 1893 and several succeeding spring seasons, is now almost dry, and much of it covered with corn. I could only see in the distance two small, marshy pools, where I had previously seen some miles of water.

The "Kishon," where the main road from Jenîn to Nazareth crosses it in the Plain of Esdrallon, is *quite* dry. I have known its crossing in previous springs as quite a business; in 1893 we were afraid to let the ladies of the party venture across on donkeys.

The usually marshy enclosed plain of *Kefr Kûk*, near Rasheiyâ, was quite dry, and the lake at Mezeirîb is much below its usual level, so that the old town is no longer on a peninsula almost surrounded by water, as described by Schumacher, and as I saw it some five years ago, but is now on the mainland, simply projecting slightly into a much reduced lake. The lake must, by comparing the plan given by Schumacher (*Across the Jordan*, p. 157), be less than half its former size, and that the water is lower by 5 feet or more is evidenced by the marks on the basaltic rocks that strew the shore. The stream leaving the lake is now a very small one.

4. *Means of Communication.*—The road which was carried last year to *Bîreh* is now being pushed northwards; we found some two or three miles either already metalled or being metalled.

The work on the *Ḥaifa-Damascus Railway* is now quite suspended.

The *carriage road to Tiberias*, though improved greatly from what it was 10 years ago, is in a terrible state near Kefr Kenna. This, however, does not prevent its use, for at Tiberias we found no less than 53 carriages, which had brought a party of Spanish pilgrims from Ḥaifa.

5. The passenger traffic on the *Damascus to Mezeirîb Railway* is so small that now trains are run only four days a week—on Tuesdays, Thursdays, Saturdays, and Sundays—and not, as at first, daily.

There is much activity at Mezeirîb connected with the Damascus to Mecca Railway. This line is now run as a direct continuation of the French line to Mezeirîb, but I understand the Turkish authorities have not been able yet to come to terms with the French Company for the purchase of their line, and so are making an independent line from Damascus. The new line is complete for several miles, we saw it sweeping away to the east of us as we followed the Haj road on our way to el-Husn. A friend of mine from 'Ammân told me when I was at Jerash that the line is fast nearing completion near that place. For tourists, &c., this line will open up a most interesting part of the country, bringing the wonderful ruins of M'shitta and 'Ammân within a few hours of Damascus.

The east of the Jordan seems likely before long to be ahead of the west in the matter of roads. The Circassians of Ḳuneitra, Jerash, and 'Ammân have connected their colonies by means of cart roads which in dry

weather, at any rate, are, over the greater part, very fair. As we approached Jerash we came across a cart, much like an ambulance wagon, accompanied by over a dozen well-mounted Circassians, which was bringing a Circassian bride all the way from Kunieitra, through Jerash to 'Ammân. Over a considerable part of the way the horses were able to make quite a rapid progress, primitive though the cart wheels were. From Jerash to es-Salt we followed the greater part of the way a quite respectable road, made partly by the Circassians and partly by their neighbours, the Turkmans, of the village of er-Rummân. We passed at one place near this village no less than eighteen of their carts, each with a yoke of splendid oxen, loaded high with hay. I have never before seen hay carefully collected and stored away for the summer in this country. Although we left the road on approaching es-Salt, the Church Missionary Society teacher there told me that carts do from time to time come to that place; and the last few months I have seen several of them, loaded with tree trunks, wending their way to Jerusalem. These colonists to the east, and the Jewish colonists to the west, of the Jordan are doing much to open up means of communication.

RECENT DISCOVERIES NEAR GALILEE.

By Dr. G. Schumacher, Ḥaifa.

By the kindness of Professor Sellin I am permitted to give the following brief report on *Archæological Excavations on Tell Ta'annek*:—

In March, Professor Dr. Sellin, of the Vienna University, commenced archæological excavations, under an Imperial firman, on the site of the old biblical Taanach, the present *Khirbet* and *Tell Ta'annek* (Ta'anuk). Both sites are situated some six miles to the north-west of the town of Jenîn, on the high road leading from that place to Ḥaifa, on the southern borders of the plain of Esdraelon. The tell rises from 120 to 140 feet above the surrounding plain. It has distinctly terraced slopes, and on its summit is a large pear-shaped plateau of a maximum length of 1,050 feet and a greatest width of about 450 feet. Its culminating point reaches nearly 800 feet above sea level. The summit showed heaps of scattered building stones and fallen walls, and a sharp edge bordering the plateau. The stones are of the soft Nâri limestones of the local formation. At the southern foot of the tell a small village of 22 huts is built, a few gardens containing figs, pomegranates, apples, and olive trees are planted, and on the north-east of the village, about 100 yards distant, we find a small mosque which, according to Guérin (in *Memoirs of the Palestine Exploration Fund*, vol. ii, p. 68), "passes for an ancient Christian church." The jambs of the northern door show very peculiar ornaments, the interior is vaulted and modern,

but the foundations, and especially those of neighbouring ruined buildings, may be Byzantine and Roman. 200 yards to the north of the mosque a monolith of Nâri stone, standing 6 feet high, with a rounded top, can be seen erected among foundation walls of square buildings; the monolith shows faint lines of a frame on its southern face as if surrounding an inscription, but the space where such must have stood is entirely weathered. The monument strikingly resembles that of *Sakhrat Eyyûb* (Job's stone), in the Ḥaurân, only that it is not of basalt. At the northern foot of *Tell Ta'annek*, near the road, are several springs containing bad water, which are used by the natives. A large number of caves honeycomb the rocky slopes of the tell, several of which we explored. Some of them are of a large size, and connected with each other by narrow and low passages; every cave has in the rock-ceiling one or more air holes. Some of the caves must have been inhabited, others are of a sepulchral character. The large ones resemble the underground dwellings of *Derâ'â* in the Ḥaurân.

In the maps of the Palestine Exploration Fund and elsewhere the name the place is spelled *T'annuk*, but it should be *Ta'annek* or *Ta'annak* (تعنّك), as pronounced by the Government officials and people of Jenîn; the fellahin call it *Ta'ennej* or *Ta'ennedsh*, the last letter, *kaf* (ك) being changed, as usual, into *j* (ج).

On the plateau of the tell we began excavations at four different places. On the northern, eastern, and western edges, and in the centre of the mound, large trenches, 17 feet wide, were driven into the site; one of these in the centre reached a depth of over 36 feet until the rock was found, the western one touched the rock at 27 feet, the northern and eastern at considerably less depth. The *debris* through which the excavations pierced, showed different strata or building periods, each measuring from 5 feet to 6 feet in height, lined with ashes and remains of coal; in some parts heaps of ashes and burnt *débris* illustrate the fact that the old town has on more than one occasion been at least partially destroyed by fire. A large amount of pottery was found, the most recent near the surface being of Mohammedan origin, some centuries old. Below this we found Phœnician and Jewish remains, and several feet above the rock Amorite and early Jewish, probably also pre-Amorite, pottery. A number of these discoveries can be identified with the fragments of pottery found at Tell el-Ḥesy by Professor Flinters Petrie, whose excellent book on the excavations carried out on that ancient site is to every explorer of great value and interest, and an unrivalled guide.

In the western trench we struck, at a depth of 15 feet, the remains of a huge city wall of not less than 66 feet in width. This wall is composed of large flat blocks, unhewn and unshaped, quarried not in the immediate neighbourhood of the tell, for the limestone used is of a very hard structure. The wall is built up in rows of 6 feet to 8 feet thickness, the spaces between these rows are filled in with smaller stones; lime mortar

has evidently been used. Alongside the inner end of the wall, pottery jars, human remains, and bronze implements were found buried immediately above the rock. The wall must be Amorite. Remains of a glacis are visible on the exterior, the slope of which runs parallel to the present upper slopes of the tell.

On the northern trench we also struck a wall on the edge of the plateau, only a few feet below the surface. It is built up of small, soft stones, and is later than the western wall. Nearly rectangular to this wall, and close to it, two rows of upright monoliths, set several feet apart, each measuring 3 feet to 5 feet in height, are found. They are of the Nâri lime stone, are rectangular in shape, and dressed. Originally there must have been five or six monoliths in each row; the group is surrounded by rude walls founded on the earth, and probably representing an ancient Jewish shrine. Continuing the line of this row towards the south we found that it pointed exactly to a street found on the surface of the tell, which was bordered by a wall of masonry on each side. The shaft sunk below this modern Mohammedan street near the centre of the tell proved very interesting. Most of the Amorite and Phœnician remains of pottery were found here, where the rock inclines from north to south, forming an abrupt scarp of a maximum depth of over 36 feet. Below this cliff ancient pottery of probably a pre-Amorite date was discovered. Before reaching the rock in this shaft we struck a very peculiar place of sacrifice, composed of large hewn Nâri stones, set together in the shape of a dolmen, with long side slabs and shorter stones laid across the ends; the foundation upon which this work was built consists of flat stones, one of which contains a dish of about a foot in diameter for offerings. Remains of burnt seeds were found beneath the cracks in the stones. A little to the south of this place a single monolith of square shape, yet standing upright, was brought to daylight, the top being hollowed in the shape of a dish for offerings. Roughly-made walls surround these shrines.

The actual commanding summit of the tell is crowned by an Arab fort, 1 foot to 2 feet below the surface, the rooms of which have yet only been partly cleaned. Cisterns of considerable size surround this building, the largest one of which is still vaulted.

The trench on the eastern edge of the tell soon struck a brick wall; brick buildings, two cisterns, and heaps of Jewish pottery were found. Some jars were still unbroken, and contained the remains of very young children; the site may therefore represent an ancient Jewish children's cemetery, as no remains of grown people had been discovered. The bricks were made of very coarse material, and were perished when found; only a few dozen were brought intact to daylight which contained mason's marks. Amidst this infant cemetery a rock altar, with a rock-cut step, dishes for offerings, and channels for diverting the blood were found. Some 30 yards westwards from the edge the trench struck a well-built wall, with horizontal courses running from north to south; each stone was hewn; some had a conical shape; most

of them were not square and had bossed faces. The wall was followed up, and ultimately proved to be the western part of a Jewish fort of about 25 yards square, with buttresses and gates.

I prepared careful drawings of all these discoveries, which will be published by Professor Sellin. The marks and inscriptions found are very few, but, it is hoped, that the summit of the mount, below which the main Amorite buildings must have dominated, will yet show remarkable results. The excavations will be carried on until July. It seems worth mentioning, that practically no Roman remains of any kind have been traced, the site of Taanach has, therefore, so far not been occupied by Roman warriors.

The heat has been very intense during April, but, apart from occasional fevers, the health of the exploration party, consisting of four or five Europeans, an Imperial Commissioner, and 70 to 150 workmen and women, has been very satisfactory.

The camp consists of four large barracks, built of corrugated iron and lined with wood, a tent and huts made of mats, wood, and branches of trees. Caves were cleaned as shelter for the workmen, but did not answer the purpose.

A mile south-west of *Tell Ta'annek* lays the village of *Rummâneh*. Its kind and hospitable Sheikh, Mustafa el Ahmed, showed us around the village, and led us into a yard on the west containing a rock altar, with numerous cups for offerings, and the remains of an ancient building, made of carefully-dressed, large stones. The natives call this place *Kenîset Nâifeh* (كنيسة نايفة), and a site, where once a large olive tree is said to have stood, 50 or 60 yards to the west of the building, bears the same name, *Zêtûnet Nâifeh*. Modern huts and stables have been built into these ancient remains, a plan of the *Kenîset Nâifeh* can therefore not be prepared. The masonry seems Roman, but some parts may be Byzantine additions. Local tradition places a Christian church at this site. Numerous cisterns and wine presses are cut into the rocks surrounding the village.

Van de Velde identifies *Rummâneh* with the ancient city of Hadad-Rimmon; Guérin found no ancient buildings there (*Palestine Exploration Fund Memoirs*, vol. II, p. 68). It probably marks the site of Maximianopolis (*op. cit.*, p. 45).

The large village of *Sîly*, one mile south-east of *Tell Ta'annek*, contains an old Mohammedan building, called *el laṭṭa* or *el khâbi*, which has a length of 30 yards and a width of 20. Several oil presses and oil stones are erected in the vaulted interior. The building is said to be two centuries old, being used by the neighbouring villages as an olive mill; it contains ancient building stones. The village is separated into two quarters, which live in disharmony with each other. Ahmed es-Slimân, of the once great and mighty family of ej-Jeradât, governed the place and surrounding country in the beginning of the nineteenth century, and contended with the 'Abd el-Hâdy family and the Jarrâr for the over-lordship of the Northern Sh'arawîyeh country.

MOSQUITOES AND MALARIAL FEVER IN PALESTINE.

The question of the propagation of malarial fevers by mosquitoes is one that has excited a great deal of interest during recent years, and investigations which have been made at Sierra Leone, and other places where fevers are prevalent, show that there is little doubt that the germs of fever can be conveyed to the human body by the bite of the Anopheles mosquito, and that, in the districts where this species is found, the inhabitants are specially liable to suffer from attacks of fever. At the same time, it would probably be going too far to say that the Anopheles is altogether responsible for the spread of fever, as there are probably other causes, quite independent of the mosquito, to which the disease may be due.

Any information upon the subject is of value, both to residents and travellers in countries where malarial fever is present, and we have read with great interest a paper by Dr. John Cropper, which was published in the "Journal of Hygiene" for January, 1902, on "the Geographical Distribution of Anopheles and Malarial Fever in Palestine." Dr. Cropper, who has resided for some time in Palestine, and is well acquainted with the country, made a tour through the northern districts in the summer of 1900, when he carefully investigated the presence of Anopheles, and at the same time noted the condition of each place visited from the fever point of view. The route taken was from Beirût along the sea coast to Haifa, and thence south to Khudeirah. He then crossed to Safed, in the Jordan Valley, and proceeded north to Banias and Rasheiya el-Wady.

The result of Dr. Cropper's study of this question in these districts does not seem to be conclusive that the presence of fever is altogether due to the Anopheles, but he established the point that malaria is prevalent in places where Anopheles represents the majority of the mosquitoes present in native dwellings, and that the fever occurs only sporadically, or not at all, in places where an unsuccessful search was made for Anopheles. He also has shown that a great measure of protection is afforded by the use of mosquito netting to sleep under. This is a precaution which should never be neglected by travellers when visiting Palestine during the more unhealthy months of the year.

Dr. Cropper considers that the malarial fever is not conveyed by drinking water, and he mentions that he drank the water in every place visited when there seemed to be no danger of contamination from surface drainage. This rather differs from the views of some others, but he seems to have proved the truth of the statement, so far as his own party was concerned. He also throws some doubt on the usually accepted idea that turning up the soil leads to an outbreak of fever. But this has been so often demonstrated that it is not possible to regard his conclusion without considerable misgivings. Another of his observations is of much interest. At Khudeirah, a very unhealthy place, large numbers of Eucalyptus trees had been planted, with the object of diminishing the malaria, and as regards these he observes :—"In my opinion it is plain that the *Eucalyptus* trees have not done the slightest good, and perhaps only harm. Had half the money spent on planting these been used in carrying out hydraulic works the place could not fail to be healthier." Again, he says :—"Our tent was pitched for 12 days under the *Eucalyptus* trees, *Eucalyptus rostrata* and *resinifera*, the climate being unsuitable for *Eucalyptus globulus*. Mosquitoes, almost entirely *Anopheles maculipennis* and *Anopheles superpictus*, with very few *Culex*, were common, and could nearly always be found in our tent, the dark navy-blue lining of which formed a shelter, as did the dry herbage under the *Eucalyptus*, where they were always to be found." It would be interesting to know whether in other places, where the *Eucalyptus* has been planted as a guard against malaria, it has proved equally ineffective. Possibly the *Eucalyptus globulus* may be of more use than the species named by Dr. Cropper.

It is to be hoped that he may have an opportunity of continuing his investigations later, and arriving at some definite conclusion. Any research into the causes and means of prevention of malarial fever is very valuable.

C. M. W.

FOREIGN PUBLICATIONS.

Recueil d'Archéologie Orientale, vol. V, parts 1–5. — M. Clermont-Ganneau describes a remarkable Phœnician stele found by natives amid the ruins of Umm el-'Awâmid, which were partly excavated by M. Renan. The monument, now in the museum of M. Jacobsen, of Copenhagen, belongs to the Ptolemaic period, and bears the evident stamp of Greco-Egyptian art. It gives not only a very striking portrait of a man of the second century B.C., but an authentic specimen of the race to which the Phœnician "rab"—a title indicating civil or religious rank—belonged. The figure is on foot, with the head in profile. The face, completely shaved, is that of a man already advanced in age; it is bony, emaciated, almost ascetic-looking, and modelled in a realistic spirit which at once arrests the attention. Immediately beneath the left hand is a well-cut Phœnician inscription in three lines.

Translations of some of the papers—"Dannaba and the country of Job," "Zeus-Helios," and "Baal Bosor," &c.—have appeared in the *Quarterly Statement*. Amongst those that remain may be noticed a discussion of some of the "Palestinian and Syrian Place-names" in the episcopal lists compiled by Michael the Syrian, at the end of the twelfth century. The diocese of Haurân of Bithynia is happily identified with Haurân of Batanæa, and Arde'at of Bithynia with Adra'â of the Haurân. The "Mosaic Inscription of Beit Surîk" is held to be a list of persons, perhaps five in all, under whose authority either the mosaic, or the church, of which it formed part of the floor, was constructed. The date of the inscription appears to be the fifth year of the Emperor Anastasius, 516 A.D. M. Ganneau also discusses the bilingual, Nabataeo-Greek inscription in Wâdy Maghârah (Sinai), of which a cast was made during the Ordnance Survey of Sinai (1868-69). A good copy is now in the museum of the Fund. Another paper deals with the place names and topographical information contained in the Act of Amalric, dated April, 1166, which confirms certain gifts to the Abbot of the Templum Domini (Kubbet es-Sakhra) at Jerusalem. This interesting document, lately published in the *Revue de l'Orient latin*, gives a list of the possessions of the Abbey of the Templum Domini throughout Palestine; and is an important contribution to our knowledge of Palestine during the Latin Kingdom of Jerusalem.

Revue Biblique, vol. XI, part 2.—This part contains a brief account of the Armenian excavations near David's tomb, of which a short notice by Mr. Macalister was given in the *Quarterly Statement* for April (p. 109). The general result of the work so far has been to prove the existence of a dense population on this part of the hill during Roman and Byzantine times. There are also descriptions by Father Vincent of a Jewish ossuary, with Hebrew *graffiti* from a tomb near Abu Ghosh

(Kuryet el-'Enab); of the ancient tomb with ossuaries discovered a few months ago on the Mount of Olives (plan and sections); and of additional inscriptions—names of centurions—found by Father Germer-Durand on the stone tube of the syphon of the high level aqueduct near Rachel's Tomb. Amongst the papers of more general interest, one by Father Lagrange, *Études sur les religions sémitiques, Les Morts* deserves notice.

Zeitschrift des Deutschen Palæstina-Vereins, vol. XXIV, part 4.—The first paper contains valuable notes by Professor Dr. Röhricht, on Bernhard von Breitenbach's Map of Palestine, accompanied by a reproduction of the map in three sheets. There is also a most interesting and well-illustrated paper on the Orpheus mosaic (*see Quarterly Statement*, 1901, p. 423), by Professor Dr. Strzygowski, who arrives at conclusions which differ in several particulars from those of Father Vincent. The paper concludes with some notes by Dr. Dadian, on the Armenian mosaic near the Damascus Gate. There is also an appreciative notice by Professor Guthe of Dr. Otto Kersten and his work.

C. W. W.

NOTES AND QUERIES.

1. *Graffiti from Mashita.*—Of the graffiti from the ruins of Mashita[1] which Mr. Nies has reproduced in the *Quarterly Statement* for October, 1901 (*see* p. 367), No. 5, curiously enough, has exactly the form taken by בן, "son," in the Ṣafâ inscriptions, found in the region of the Ḥarra to the south-east of Damascus. From Doughty's table ("Arabia Deserta," vol. I, p. 125), it would appear also to be the wasm of the Moahîb. Nos. 2 and 4 partially suggest Palmyrene analogies, but no plausible transliteration lies at hand, the latter, at least, is not unlike the wasm represented by Sachau, "Reise in Syrien," p. 134, l. 2 (1883).

The confusion between wasms and "ancient words or letters" is a very natural one, since a number of the former seem to have been borrowed from a south Semitic script for the same purpose as the *koppatias* and *samphoras* of the ancient Greeks. Others of them undoubtedly represent natural objects, though it would not be safe to assume that the modern native explanations and interpretations are everywhere correct. The late Professor Robertson Smith once

[1] Compare *Meschta* on Burckhardt's map, and *al-Mashtah*, "Robinson's Lists," p. 169.

suggested that the wasms, "if collected in sufficient number, with careful notes of the places they come from, might, when compared with the modern camel-brands, have a tale to tell." But no systematic attempt, as far as I am aware, has ever been made to investigate this interesting subject, owing, no doubt, to the limited amount of material. The marks which Mr. Nies has collected do not at present lead to any clue, but the hope may be expressed that future travellers may be induced to give the subject due consideration.[1] For those who may desire to pursue the inquiry further the following additional bibliographical references may be of some assistance:—

Bent, "Southern Arabia," p. 369.
Burckhardt, "Bedouins and Wahabys," p. 113.
Burton, "Land of Midian," I, p. 321.
Burton and Drake, "Unexplored Syria," I, p. 342.
Conder, *Quarterly Statement*, 1883, pp. 178-180, *cf.* "Heth and Moab," p. 349 *seq.*, "Tent Work," II, p. 290.
Ewing, *Quarterly Statement*, 1895, p. 163.
Sachau, "Reise," pp. 119, 136.
Schumacher, "The Jaulân," pp. 67 *seq.*, 90.
Wetzstein, in "Globus," xxxii (1877), p. 255 *seq.*

For parallels outside the Semitic world, reference may be made to A. L. J. Michelsen, "Die Hausmärke" (Jena, 1853), and R. Andree, "Ethnographische Parallelen," 2nd ser., pp. 74 *seq.* (Leipzig, 1889).

S. A. Cook, M.A.

2.—In his Primer, Colonel Conder says of Hebron, "the old city lay on the low hills to the west of the valley," but in the *Spectator* (May 17, 1902) "Hebron never was, and is not, on a hill."

The discovery of Jacob's Egyptian wrappings (the mummy will be missing) beneath the great mosque would virtually settle the site of the cave of Machpelah, and the western position of Hebron or Mamre, before which was the cave in the field of Machpelah (Gen. xlix, 30), or one of the three.

[1] The present is a convenient opportunity to express the hope that the allusion which Mr. Nies makes to the "long Hebrew inscription" at Juadie (el-Yadudeh?) will not escape the attention of travellers.

Excavation will probably reveal traces of the walls of this ancient city. An indication of its precise position happily existed 46 years ago. Hebron like Jebus, Gibeon, &c., would doubtless have access to a supply of water, and possess a secret passage or *gutter* as an outlet from within the walls (Judges i, 25 ; 2 Samuel v, 8). The survey of Western Palestine (*Mem.* III, 307) describes a fine perennial spring (on the western hill) Ain el-Judeideh, in a vault or cave (reached by steps), traditionally older than Adam. H. Bonar (*Land of Promise*) states that "from (adjacent) ruins (Deir el-Arbain), on a height, it is said there is a passage to the mosque a mile distant." Grateful then for this clue, *for* "mosque" I *read* "spring," and thus identify the passage leading from the Deir with the required *gutter* of Hebron.

Rev. W. F. Birch, M.A.

THE

PALESTINE EXPLORATION FUND.

NOTES AND NEWS.

Since sending his report of the excavations at Gezer, Mr. Macalister writes that a second burial cave has been found which, if not so extensive or instructive as the first, is in some respects almost as interesting:—

"It is a bell-shaped excavation, about 14 feet in diameter at the bottom, with a round hole at the top. It belonged originally to one of the earlier settlements, but was adapted as a cistern by the inhabitants of the fourth (the latest) city, a masonry shaft having been driven through the intervening débris. A curious conduit of broken potsherds was made to lead water to its mouth. Concluding that it was simply a fourth-city cistern, I ordered it to be cleared out, in the hope of finding objects accidentally dropped by water-drawers: this has led to the discovery of its original purpose, made to-day (August 28). I write these preliminary paragraphs at the earliest opportunity, in order to catch a mail, hoping to be in time for the October *Quarterly Statement.*

"Six skeletons have been recovered. That they were not victims of drowning accidents, but were buried, is shown by the uniformity with which five of them had been laid in a contracted position (already shown to be characteristic by the first burial cave), with stones placed over them: large quantities of charcoal were mingled with the stones. Over these was a thick stratum of earth, solidified by the action of the water with which the cave was subsequently filled.

"The deposits found in the stratum containing the skeletons are few in number: they consist of a single blue paste bead; one food vessel empty and broken; a very fine stone fire-tray on

three feet, inverted over a few sheep-bones—no doubt the survival of a food deposit left for the benefit of the dead; and a magnificent bronze-socketed spearhead. There were many fragments of pottery found, probably the remains of broken pitchers dating from the cistern period, and in no way connected with the interments.

"The five skeletons above mentioned are all those of adult males. The sensational interest of the cave (if I may so describe it) centres in the sixth skeleton. This is that of a young girl, aged about 14. The upper half of the body alone was found, the lower half, from the end of the ribs downwards, being entirely missing: it is quite evident that the body was sawn asunder before being deposited. There is nothing in the remains to show whether we have the result of a *post-mortem* mutilation or of a ghastly murder, but the presumptive evidence of child-sacrifice already found in connexion with the first burial cave, and the fact that the skeleton thus dismembered is that of the only female and the only child found in this second cave, seem to indicate that the second is the true explanation. It is interesting to notice that near the mouth of this cave, in one of the lower strata, the decapitated heads of two girls of about the same age as this unfortunate victim were found.

"The excavation of the cave is not yet quite finished, and it is possible that further light may be forthcoming."

In a letter dated September 10th, Mr. Macalister writes further that he has been excavating near the "standing stones" which are marked on Plate I which accompanies his report. The excavation has exposed a magnificent megalithic structure. Three imposing monoliths, about 14 feet high, standing on a platform of stones, have been uncovered, with smaller monoliths between. Underneath an adjoining pavement were jars containing infants' bones (some charred), indicating that we have to do with a temple at which human sacrifices were practised. Mr. Macalister adds: "The whole makes one of the most imposing rude stone monuments I have ever seen . . . . The stones as exposed already are fully three times the size of the largest of the monoliths in the Tell eṣ-Ṣâfi 'high place.'" "This," as a correspondent observes, "is a very interesting evidence of that early practice of human sacrifice which was so strongly denounced and held up to the abhorrence of the people by the prophets of Israel. It was this

horrible form of heathen worship which led Abraham to recognise that what he had been brought up to believe was a way to God's favour, was not and could not be according to the will of God. The questions of the innocent child, walking at his side to the place of sacrifice, awakened in Abraham's heart the natural conscience and the truer knowledge of the God whom he desired to serve. These jars contain the bones of little ones whose innocent voices appealed in vain to those whose hearts had become, through a terrible fanaticism, as stony as the monoliths themselves."

Since Mr. Macalister studied the rock-cut tombs in Wâdy er-Rabâbi several changes have taken place there. No. 10 has been cleared out by someone down to the rock-floor, and his theory that this was not a tomb, but a dwelling or guard-chamber, has been confirmed (*Quarterly Statement*, 1900, p. 244). One of the "entrances" shown in his plan (that to the south-west) is a door—the other two are certainly windows. No. 47 has been cleaned, and rendered more accessible than formerly. Just north of it another tomb has been opened. The frieze over No. 50 (*Quarterly Statement*, 1901, p. 154) has disappeared, and a pretentious ecclesiastical front built in its place : the frescoes inside this tomb have all been either repainted or whitewashed. A large system of chambers, of whose existence he had been unaware, have been broken into close to No. 56. He has come to the conclusion that Tobler's 27, which he could not identify, is really his No. 40, though the position Tobler gives for it, and his "scheme" of the chambers, are not quite correct.

Mr. Macalister hopes to send fuller accounts of these changes, with plans, when the Gezer excavation closes for the winter rains.

Dr. G. Schumacher writes from Haifa on August 6th :— "Professor Sellin's excavations at Taanach were closed on July 11th, after five months' work, during which interesting discoveries were made of Jewish and Canaanite fortresses to the east, north, and west of Tell Ta'annuk. On the last day (July 10th) a most interesting Canaanite altar was found, the corners of which are ornamented with winged animals having human heads. On the top of the altar, which is made of pottery, are the two biblical

(ram's) horns, and a cup for sacrifices. The altar is square in shape, 90 cm. high and 45 cm. square at the bottom. On the front is the tree of life with two animals (deer) feeding on it, and on one side, in *bas-relief*, the symbolic man endeavouring to strangle a snake. The work is well executed, and the altar, which has been sent to the Constantinople Museum, is unique."

In the *American Journal of Theology*, published in Chicago, will be found a criticism of Professor Mommert's last work, "Golgotha und das Heilige Grab zu Jerusalem," 1900, by Dr. Selah Merrill, U.S. Consul at Jerusalem. The writer's long residence in the Holy City, and knowledge of all that has been written on the subject, gives special value to his opinion, which is adverse to the authenticity of the traditional sites advocated by Professor Mommert.

On p. 302, line 5 from bottom (*Quarterly Statement*, 1902), the dimension 66 feet refers to a tower and not to the city wall. The passage should read, "the remains of a tower measuring 66 feet from external face to external face."

The Museum and Library of the Palestine Exploration Fund at Jerusalem have been removed from the room opposite to the Tower of David to the Bishop's Buildings, near the Tombs of the Kings, where the use of a room has been kindly permitted by the Rev. Dr. Blyth, Bishop in Jerusalem and the East. The Museum is open daily, except Sundays, and the Honorary Secretary, Dr. D'Erf Wheeler, will give all information necessary.

The "Flora of Syria, Palestine, and Sinai," by the Rev. George E. Post, M.D., Beirût, Syria, containing descriptions of all the Phaenogams and Acrogens of the region, and illustrated by 441 woodcuts, may be had at the office of the Fund, price 21*s*.

In order to make up complete sets of the "Quarterly Statement," the Committee will be very glad to receive any of the back numbers.

The income of the Society from June 24th to September 20th, 1902, was—from Annual Subscriptions and Donations, including

Local Societies, £203 14*s.* 4*d.*; from Lectures, nil; from sales of publications, &c., £58 17*s.* 2*d.*; an advance of £300; total £562 11*s.* 6*d.* The expenditure during the same period was £575 10*s.* 11*d.* On September 22nd the balance in the Bank was £279 3*s.* 8*d.*

Subscribers are informed that the Committee have decided henceforth to discontinue the publication of the Lists of Subscriptions at the end of each *Quarterly Statement.* Instead of the Quarterly Lists a complete List of Subscriptions and Donations will be published separately with the Annual Report and Statement of Receipts and Expenditure of each year.

Subscribers in U.S.A. to the work of the Fund will please note that they can procure copies of any of the publications from the Rev. Professor Theo. F. Wright, Honorary General Secretary to the Fund, 42 Quincy Street, Cambridge, Mass.

The Committee will be glad to communicate with ladies and gentlemen willing to help the Fund as Honorary Secretaries. Professor Lucien Gautier has kindly consented to act for Geneva, and Colonel E. H. Paske for Bournemouth and Parkstone.

The price of a complete set of the translations published by the Palestine Pilgrims' Text Society, in 13 volumes, with general index, bound in cloth, is £10 10*s.* A catalogue describing the contents of each volume can be had on application to the Secretary, 38 Conduit Street.

The Museum at the office of the Fund, 38 Conduit Street (a few doors from Bond Street), is open to visitors every week-day from 10 o'clock till 5, except Saturdays, when it is closed at 2 p.m.

It may be well to mention that plans and photographs alluded to in the reports from Jerusalem and elsewhere cannot all be published, but all are preserved in the office of the Fund, where they may be seen by subscribers.

Photographs of the late Dr. Schick's models (1) of the Temple of Solomon, (2) of the Herodian Temple, (3) of the Haram Area during the Christian occupation of Jerusalem, and (4) of the Haram Area as it is at present, have been received at the office of the Fund. Sets of these four photographs, with an explanation by Dr. Schick, can be purchased by applying to the Secretary, 38 Conduit Street, W.

Branch Associations of the Bible Society, all Sunday Schools within the Sunday School Institute, the Sunday School Union, and the Wesleyan Sunday School Institute, will please observe that by a special Resolution of the Committee they will henceforth be treated as subscribers and be allowed to purchase the books and maps (by application only to the Secretary) at reduced price.

The Committee will be glad to receive donations of Books to the Library of the Fund, which already contains many works of great value relating to Palestine and other Bible Lands. A catalogue of Books in the Library will be found in the July *Quarterly Statement*, 1893.

For list of authorised lecturers and their subjects, write to the Secretary.

FORM OF BEQUEST TO THE PALESTINE EXPLORATION FUND.

I give to the Palestine Exploration Fund, London, the sum of _____ to be applied towards the General Work of the Fund; and I direct that the said sum be paid, free of Legacy Duty, and that the Receipt of the Treasurer of the Palestine Exploration Fund shall be a sufficient discharge to my Executors.

*Signature*_____

Witnesses _____

_____

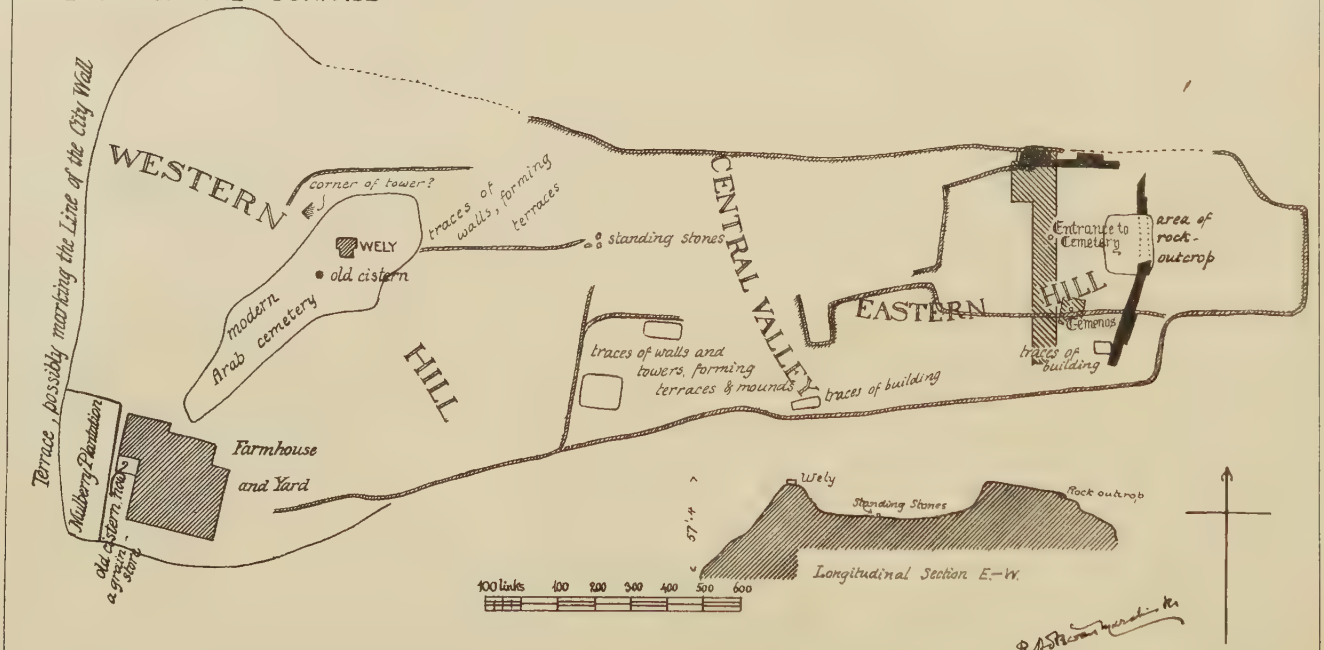
_____

NOTE.—*Three Witnesses are necessary in the United States of America; Two suffice in Great Britain.*

Whilst desiring to give publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

EXCAVATION OF CEZER

PLAN OF THE SURFACE



HARRISON & SONS, LITH. ST MARTIN'S

FIRST QUARTERLY REPORT OF THE EXCAVATION OF GEZER.

(*June* 14*th to August* 14*th*, 1902.)

By R. A. Stewart Macalister, M.A., F.S.A.

§ I.—Preliminary Account of the Methods of Work and of the General Results.

The necessary formalities having been carried through, I commenced residence in the camp at Abu Shusheh on June 9th. I was, however, unable to begin the actual work of excavation till the 14th, owing to the absence on Government business of the Imperial Commissioner. The interval was spent in arranging camp furniture and stores, in surveying and mapping the mound, in making a more careful examination than previously of the surface indications, and in deciding how and where to commence the excavation.

In my paper on the "History and Site of Gezer," published in the last number of the *Quarterly Statement*,[1] I mentioned that the mound, which lies due east and west, rises at each end into a knoll. These knolls are probably the débris-covered tops of two natural hills, with a valley between them which (like the Tyropœon valley at Jerusalem) has become filled up with rubbish from the elevated parts of the city. In this and subsequent reports, when I have occasion to speak of these separate divisions of the mound, I shall refer to them as the "Eastern Hill," the "Central Valley," and the "Western Hill" respectively (*see* Plate I). Possibly this division of the town into two parts—one on each hill—may have something to do with its name: at any rate, the radical גזר involves the idea of "separation."

I decided that it was advisable to confine my attention at first to the Eastern Hill, as the top of the Western Hill is occupied partly by a modern cemetery and partly by the shrine of the local saint, and it seemed wise to avoid this forbidden ground as much as possible at the beginning of the work.

[1] *Ante*, pp. 227–232.

The length of the plateau on the top of the Eastern Hill (west to east) is about 500 feet. There is an extensive area at its eastern end over which the rock crops out to the surface, and where the soil, when tested by trial shafts, was nowhere more than 4 feet deep. I concluded that this part of the plateau might for the present be passed over. A point was therefore selected on the north side of the mound, where trial-pits showed that the soil commenced to deepen (just west of the area of shallow earth), and a trench 40 feet wide was cut right across the mound from north to south. A second trench, continuous with the first and west of it, is now being dug; and this process will be continued throughout the excavation.

The accumulation of débris is not very deep—the greatest depth yet reached is 18½ feet; and the objects it contains are uniformly of high antiquity. On this Eastern Hill we have to deal almost, if not quite, exclusively with pre-Israelite occupations: the remains, perhaps, of the Solomonic, and certainly of the Maccabean and later cities, are to be sought elsewhere, probably on the Western Hill. The principal results of this excavation have been the discovery of sections of a great city wall, of a most important burial-cave, the examination of which has thrown much light on the physical characteristics, funerary customs, and pottery of some of the earliest races of Palestine; of a small *temenos* or high place, containing a stone circle; and of a considerable variety of objects belonging to the later stone age and the bronze age of culture.

In addition to the running of trenches across the hill, other work has been undertaken—namely, the tracing of the course of the city wall and the examination of the evidences of rebuilding and alteration which it presents, the opening and clearing of ancient cisterns, and the search for tombs.

The portion excavated is hatched on the accompanying plan (Plate I); the course of the city wall, so far as has been determined, is laid down; and the positions of all the most important discoveries denoted, as far as the necessarily small scale of the plan permits. To enable subscribers to follow the progress of the work, this plan will be repeated with subsequent reports, hatching and other details being added as the excavation proceeds. To distinguish surface sites from those discovered underground, the latter are marked in Gothic characters.

§ II.—The Buildings.

The *house-walls* are uniformly in a chaotic state of ruin, and it has so far been impossible to recover the complete plan of any single dwelling. The principal value of these remains consists in their easily recognisable stratification, from which the outlines of the history of the occupation can clearly be deduced.

Throughout there are three well-marked series of walls; but underlying the lowest we have here and there a few rude structures assignable only to a still earlier occupation, and in one or two places are to be found evidences of imperfect rebuilding within the limits of a single stratum. There are, besides, a few intrusive walls belonging to some later period, built after the surface had been deserted; these are insufficient to be classed as a fifth occupation, being merely such walls as might naturally be built for dividing property, or for landmarks in open fields, &c.

The four main strata of building I number I, II, III, IV, from rock upwards to surface. Should it ever prove necessary to refer to the subdivisions of strata caused by rebuilding, they will be indicated by the notation, *e.g.*, II*a*, II*b*, the first being the lower.

The walls all consist of rough stones of a great variety of sizes, from small pebbles to large boulders, which a strong man can scarcely lift, set in mud. None of the stones show evidence of any but the very roughest hammer dressing. A certain amount of sun-dried brick was also used, but the few walls built of that material were invariably founded on a course or two of stones. At two places in the first trench were found large solid masses of brick-work, irregular in outline, belonging to the third city; they were each about 6 feet high, and measured respectively, in cross dimensions, 8′ × 3′ 6″ and 9′ 3″ × 7′. In the top of one of these was sunk a circular vat about 2 feet across. As an example of the size of brick used I give the dimensions of a fine specimen—1′ $3\frac{1}{2}$″ × 1′ $3\frac{1}{2}$″ × 7″.

The floors of the houses, when they were traceable at all, consisted as usual of beaten mud and limestone. They were valuable in supplying date levels, as were also the pit-ovens found in considerable numbers throughout the trench. One of the house floors had a deep circular depression sunk within it; no doubt many domestic purposes could be assigned to this feature, which showed no special indication of the use for which it was made.

As each stratum is uncovered in the course of excavation the walls revealed are drawn on a plan and coloured brown, green, blue, yellow, and red, according as they are assignable to the first, second, third, or fourth cities, or to the intrusive stratum of occasional walls on top. The value of this method of showing the superposition of walls has already been demonstrated by such plans as that of Hissarlik by Dr. Dörpfeld. It is, however, impossible to reproduce any of the sheets of this plan in the *Quarterly Statement*, as they are necessarily of large size. It should be noticed that the first and second cities can be distinguished only where remains of both are present, and as a general rule there are only three strata existing. There are, however, too many traces of the first throughout the excavation to permit us to limit the number of cities to three. No walls or other remains will be assigned in these reports or on the plans to the first city without clear evidence being forthcoming, in each case, of the accuracy of so doing.

Characteristic of the first city are a number of broad, stone *causeways*, usually about 5 feet thick and 1 foot to 3 feet high, laid on the surface of the rock, and generally crossing irregular natural depressions therein.

The *city wall* is a magnificent structure, of an average thickness of 14 feet, and in some places standing below ground to a height of 12 feet. At intervals it has towers on the outer, and also on the inner side; the external towers are alternately (?) of shallow and of deep projection, the former extending about 3 feet, the latter about 12 feet, beyond the face of the wall. The angles of the larger towers are rounded, and the faces of both have a batter.

At the back of the wall runs another, of much less thickness, and practically parallel with it. There are reasons for regarding the inner as the more ancient structure, probably belonging to the first or second city, and the outer and larger wall as the defence of the third or fourth. At the north-east and south-east angles the two walls interfere with one another in a very complex manner; and I prefer to leave these portions undrawn on the plan, and undescribed in the report, till a little more excavation has enabled me more fully to work out their architectural history. At present I will content myself by remarking that, considering the remote period to which these works must be assigned, both walls show a surprising amount of skill in stone-dressing and masonry, for which

the roughness of the enclosed house-walls hardly prepare us. Probably each man built his own house as his skill permitted, but for important public works of this kind trained artificers, perhaps imported from Egypt, were employed.

The *Temenos* (Plate II) was made the subject of a special investigation. Its western wall projected slightly into the eastern side of the first trench, and attracted attention by its superior masonry and evident importance. A pit was accordingly dug to the east of the trench in order to determine the nature of the building to which this wall belonged. Being on the rock, and overlaid by two later independent series of buildings, it must be assigned to the first or the second city. It consists of a four-sided enclosure, not rectangular, though probably intended to be so, with rounded corners. There is no definite rule of orientation deducible. The width of the enclosure (exclusive of the 2 feet 6 inches thickness of the walls) averages about 45 feet. The western half is occupied by cross-walls, dividing the enclosure into chambers. The eastern half is free from buildings, except for a circle of small stones about 1 foot 6 inches high, set on end on a platform of beaten mud raised about a foot above the rock. Unlike any other stone circle I know of, the stones are cemented together with mud.[1] About a third of the circumference of the circle is left open. There are distinct marks of fire, both smoke-blackening and heat-splintering, especially on the end stone of the curve at the eastern side.

It is natural to compare this structure with the analogous building found at Tell eṣ-Ṣâfi.[2] In both an enclosure bounded by a large wall is partly occupied with chambers, partly empty, except for a rude stone structure, and there can be little doubt that both have been made for the same purpose. There are, however, important points of contrast whose significance would probably be more comprehensible if we knew more of the nature of the primitive rites conducted in these high places. At Tell eṣ-Ṣâfi the rude stone structure is an alignment; here, it is a circle. There, it is megalithic; here, microlithic. There, it is rigidly oriented east and west; here, no orientation can be detected. There, an elaborate

[1] This may have been frequent, or even usual; of course, mud or small stones filling up the interstices of a dolmen, or a stone circle exposed to wind and weather, would long since have disappeared.

[2] *See* the *Quarterly Statement*, 1899, pp. 318–324, with associated plates; also the new *Memoir*.

arrangement of apses with a skewed doorway seems to indicate some form of sunrise-worship; here, there is nothing of the kind. To infer that the Gezer high-place is simpler, therefore more primitive, and therefore older, than that at Tell eṣ-Ṣâfi would be unscientific, for in the first place the simplest rites are not necessarily the most primitive (if anything the study of comparative religion leads to an opposite conclusion); and in the second, rites of religion are usually so jealously conserved against change that it would not be possible for the Gezerite type of high-place to evolve into that illustrated at Tell eṣ-Ṣâfi, or *vice versâ*, within a reasonable period of time. Rather, are we to see in these two structures, so similar yet so diverse, the remains of two distinct and contemporary varieties of one religion, which can easily be accounted for by assuming a slight racial difference between the natives of Gezer and those of Tell eṣ-Ṣâfi. For this assumption further evidence will be forthcoming as this report proceeds.

In connexion with the description of this enclosure, it is well to notice a considerable number of small rounded pillar stones which have been found all through the excavation. Most of them are found in the lower strata, but some were unearthed quite close to the surface. The largest and finest seems to be associated with the burial cave, to which a later section of this report is devoted, and it will there be described. The others are all small, not more than 1 foot 6 inches or, perhaps, 2 feet high, and 1 foot 6 inches in diameter; they are circular in section, and resemble the drums of rather rude columns more than anything else: it is quite evident, however, that they serve no constructional purpose, and there can be little doubt that they are *maṣṣebôth* or bætylic pillars, like the stone anointed by Jacob at Bethel.

Near the north end of the first trench was found a large standing stone on the rock, untooled, 7 feet 6 inches high and 4 feet 10 inches broad. It was kept in an upright position by two smaller stones wedged under it. Like the standing stones at Tell eṣ-Ṣâfi it had been adapted constructionally, second city walls having been butted against it. I have little doubt, however, that it was originally set in position by the first city occupants. It is shown in Fig. 2, which was photographed after the intruding walls had been nearly all removed: the remains of one will be seen to the left.

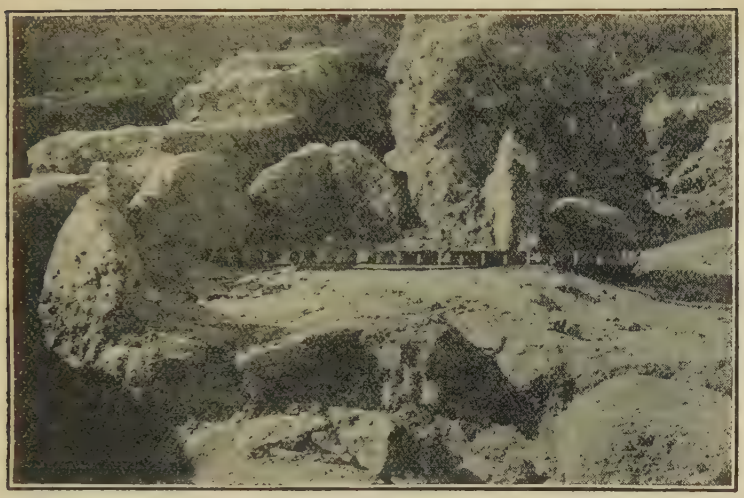


FIG. 1.—Stone Circle in High Place.

FIG. 2.—Standing Stone.

§ III.—Stone Objects.

Flint.—The flint implements found in such profusion in the sites already excavated in Palestine, reappear at Gezer with the like frequency. The ordinary forms of flaked flint from Palestine have already been fully illustrated (*see* P. TH., Plate X; B. MMC., p. 124, with the appendix, by Mr. Spurrell, pp. 193–197; BM., Plate LXXI),[1] as well as identical types from elsewhere (*e.g.*, PC., "Primitive Greece," vol. i, p. 121). It is not necessary to say more than that fine examples of all the types illustrated have been found, but, except a triangular awl or pricker (Plate III, Fig. 1), 8·8 cm. long, and a small arrowhead 2·6 cm. long (Plate III, Fig. 5), no new form has come to light.

The *flaked* flints, as is well known, are found at all periods down to the Seleucidan. The only chipping they show is a little touching up of the edge, which generally produces the appearance of a finely-toothed saw (as in all the examples in P. TH., Plate X). Flints formed entirely by *chipping* are, however, confined to the earliest ages of Palestine occupation, and when found are a certain indication of remote antiquity. None of the chipped flints of Palestine have, so far as I know, been illustrated: one specimen was found at Tell es-Ṣâfi. The accompanying drawing (Plate III, Fig. 2) of a magnificent example from Gezer, 8·6 cm. in length, may supply the deficiency. It was found in a pocket of earth between the foundation of the great city wall and the rock, on the inside, at the north end of the first trench.

Associated with this flint was a curious little bar of stone, at present 4·5 cm. long, but (being broken at each end) originally longer. The sides, end, and edge are shown in Plate III, Fig. 3. It has a slightly convex—almost plane—face, and a convex back. The face is ornamented with groups of lines, finely and closely cut, arranged in a basket or plait pattern, carried round the edges and some way over the back. I have no idea of the purpose of this object, which, from its associations, must be of great antiquity. The stone is a close-grained granite, with very fine particles of mica.

[1] P. TH. = "Tell el-Ḥesy" (Lachish), by W. M. Flinders Petrie. B. MMC. = "A Mound of Many Cities," by F. J. Bliss. BM. = "Memoir on Excavations at Tell Zakarîya, &c.," by F. J. Bliss and R. A. S. Macalister. CCM. = "Catalogue of the Cyprus Museum," by J. L. Myres and M. Ohnefalsch-Richter. PC. = Perrot and Chipiez' "Histories of Art." These abbreviations will be used throughout this and subsequent reports.

Marked flints are so extremely rare that every specimen is worth recording. Two such were found at Gezer. They are flat knives, respectively 10 and 8 cm. in length, with, on one side a calcareous deposit, on which the marks are scratched. The second, with a rude animal figure, is especially interesting (*see* Plate III, Figs. 6, 7).[1]

Mace-heads.—The egg-shaped perforated balls of quartzite (by some termed mace-heads, by others [*cf.* CCM., p. 55] apparently considered as merely large spindle-whorls), which are found in considerable numbers in Egypt and Palestine, have been fairly plentiful in the present excavation. Most of the specimens found were fragmentary, but one very fine unbroken example was recovered. Typical examples will be found figured in B. MMC., pp. 40, 41; the specimen here illustrated (Plate III, Fig. 4) is peculiar in having the perforation stopped at about one-half the length of the object from the broad end. As a rule the perforation is carried completely through. It is 4·4 cm. in length.

Ornamental Stones.—That the Gezerites were not blind to the æsthetic effect of pretty stones is shown by the numerous polished

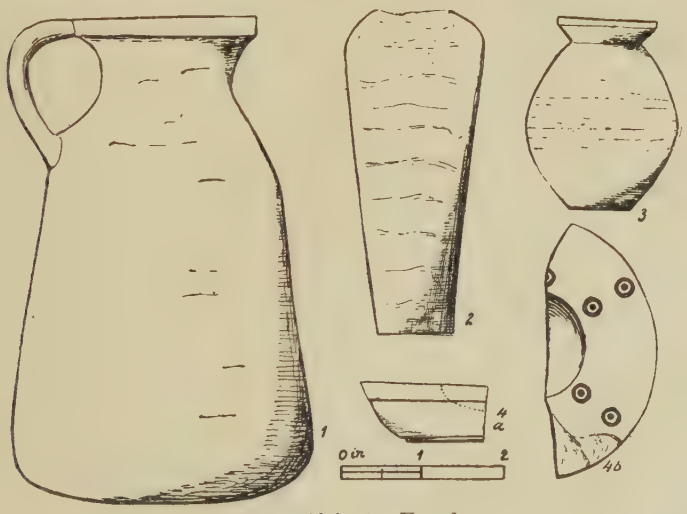


Fig. 3.—Alabaster Vessels.

pebbles of jasper, agate, chalcedony, and quartzite which exist through the débris; by two or three fragments of polished diorite jars; and by several vessels of alabaster, including two remarkably

[1] It is worth noticing that the first of these flints was found on the rock, the second (with the animal figure) just under the surface.

finely veined and well-cut fragments. A minute crystal of emerald, uncut and unpolished, and a bead or two in carnelian, complete the catalogue of precious stones.

Corn-grinders and Cooking Vessels.—Corn was ground in three ways: by mortars and pestles, by rubbing-stones, and by quern-stones. Examples of all three classes have been found, but I reserve a more complete study of them for a future report, referring meanwhile to B. MMC., p. 85, and BM., Plates LXXII, LXXIII, where illustrations of typical specimens will be found.

By the term "cooking dishes" I denote a peculiar type of shallow circular bowl, about 1 foot in diameter, raised on three legs. One specimen was found, in fragments, but almost entirely recovered; another whose legs had been lost was also found, as well as fragments of the legs of others. The type persisted to the Seleucidan period, for a specimen was found at Tell Sandaḥannah blackened with smoke.[1]

Miscellanea.—I may mention under this head a peculiar chair-shaped object in soft white limestone, ornamented with lines roughly scratched upon it, 10·2 cm. high, 7·2 cm. broad, 6·8 cm. thick (Plate III, Fig. 8); a block of stone with a bowl-shaped depression on one side, like a mortar, but with a channel running out of it; height 20·3 cm., breadth 24·1 cm., length 35·6 cm. (Plate III, Fig. 9); and a small bar of limestone with a depression like a finger-mark on one end (Plate III, Fig. 10). I can assign no purpose to any of these objects, unless the last be the foot-stone of a carpenter's drill, worked, like the analogous instrument in use in the east at the present day, by a bowstring. The stone, however, appears almost too soft for such a purpose.

It is as important to notice the absence of objects as their presence. To these remarks, therefore, should be added that nothing resembling a draught-board, so common in the Shephelah tells,[2] has yet been found. The other stone objects discovered, being all of common type, need not be enumerated individually; they are pounders, sling-balls, weights (for *weighting*, not *weighing*), hammer-stones, &c. (*see* BM., Plates LXXII, LXXIII, where similar articles are illustrated).

[1] While this report was in progress, a very fine perfect specimen was found.

[2] The "Shephelah tells" is the term by which I shall refer collectively to the four mounds excavated under the last firman held by the Palestine Exploration Fund—Tell Zakarîya, Tell eṣ-Ṣâfi, Tell ej-Judeideh, Tell Sandaḥannah; Tell el-Ḥesy is *not* included.

§ IV.—Copper and Bronze Objects.

There is more variety and interest in the objects of copper and bronze than in those of stone. The majority are arrow-heads, javelin-heads, pins, needles, and spatulas. Tweezers and fibulæ are also found, as well as an occasional ring, but armlets are entirely absent.

The *arrow-heads* are all of the leaf-shaped type, with a tang square in section and slightly tapering; barbed arrow-heads are unknown, as are also types with a cylindrical tang.

The *javelin-heads* are distinguished from the arrow-heads by being of greater size, but otherwise they are similar. The blades, however, are narrower in proportion, and in several there is a distinct central rib, as well as thickening at the edges of the blade. The tangs are all square in section, slightly swelling at the base into stop-knobs; in one example there is a suspicion of lateral flanges.

A fine copper javelin-head, found in the third city, is deserving of special mention. It is unlike all the others in having no tang. The blade, which is 10·3 cm. long, is tapering, a flat oval in section, with a very faint suggestion of a central rib at the base.[1]

Spear-head.—One magnificent spear-head of bronze was discovered in the excavation. The blade is flat and triangular, with abrupt basal angles; a short, flat, tapering tang is attached. The length of this spear-head is 17·4 cm. It belongs to the second city.

Pins can be classified into two divisions—round-shanked and square-shanked; the former slightly predominate. Though pins are very common, perfect specimens are few, as it is almost impossible to recover these delicate, often highly corroded, objects without injuring them. There is a considerable range in the diameters of the shanks, some being as fine as 1·5 mm., others almost 1 cm. in thickness; as a general rule, the square-shanked pins are the coarser.

The heads are generally plain, abruptly square-cut. In a few examples the pin ends in a shuttle-shaped knob (Fig. 4, *a*), with a sharp point at the top; and in some of the square-shanked pins

[1] At almost the last moment, before my finishing and despatching this report, a *socketed* javelin-head has been found. This, so far as I can find, is unique in Palestine.

the head is in the form of a chisel-point. Ornamentation of the shank in the neighbourhood of the head by means of a series of fine lines (as in BM., Plate LXXIX, Nos. 34, 35) is rare, and only to be detected after a minute inspection of the objects. Expanding heads like an open umbrella in shape (as in BM., Plate LXXIX, Nos. 36–39) are quite absent.

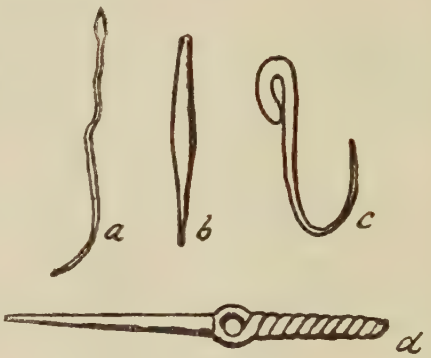


Fig. 4.—Pins, &c.

Besides the ordinary pins, whose average length was about 10 cm., there were a few minuter pins (possibly nails); a rather flat rectangle in section, expanding from the tip towards the head, and then contracting again: length, about 3·5 cm. (Fig. 4, *b*).

Needles.—Needles are capable of classification according to the position of the eye. Two well-marked types have been found in considerable numbers: in the first the top of the shank is bent, like a shepherd's crook, into an oval eye; in the second the eye is cast on the shank at some point midway between head and tip. Not more than one example could be found of the third possible form in which the eye is drilled (on a slightly hammered part of the shank) after the needle has been made.

The first and third of these types were found in the Shephelah tells, and are illustrated in BM., Plate LXXIX, Nos. 23–30 and 20–22 respectively. But not a single example of the second type made its appearance during the work on those sites; specimens were, however, found at Tell el-Ḥesy, and may be seen figured in B. MMC., p. 59.

Here for the first time we are confronted by a significant fact, which will meet us again in a later section. During the work on the Shephelah tells Dr. Bliss and I were occasionally perplexed by the absence from those mounds of types of antiquities which had been found in corresponding strata at Tell el-Ḥesy; and in compiling the memoir we were obliged to go back to the latter tell for illustrations of those types. They have, however, reappeared

at Gezer so conspicuously as to suggest a connexion between the antiquities, and therefore between the inhabitants, of Gezer and Lachish which did not exist between the folk of either town and those of the Shephelah tells.

Of such a connexion we are not without literary evidence. Abdḥiba of Jerusalem, as we have already seen,[1] complains of a league which the Gezerites and Lachishites, together with the men of Ashkelon, had formed against him; and when Joshua invested Lachish it was the king of Gezer who, to his own destruction, went to the help of the town. There must have been some reason why the inhabitants of Lachish sought and obtained help from the comparatively distant Gezer rather than from the numerous cities which were considerably nearer; this *rapport* between the antiquities of the two places, by suggesting the possibility of a close racial connexion, seems to indicate what that reason was.

There is nothing further to be said about the needles, which are essentially pins with eyes, and with two minor differences they are in all other respects similar to pins. These minor differences between the types of needles and pins are—first, the absence of very fine shanks, such as are sometimes to be found in pins; and secondly, the entire absence of square shanks.

Two examples were found of needles of the second type—with the eye on the shank—made of silver (Fig. 4, *d*). In these the head above the eye is ornamented with a spiral line, making the loop and head appear as though composed of two twisted wires. This however, is not so.

Whether the hook-shaped object in Fig. 4, *c*, be merely a damaged needle or be intentionally bent into this form I cannot decide.

Spatulæ are comparatively rare, and only one really fine specimen has come to light. It has a triangular head and a long cylindrical shank, ornamented near the head with groups of incised lines. The length is 18·8 cm.

Tweezers (a class represented thus far at Gezer by one damaged specimen) consist of small bronze strips bent into a tong-like shape. The *fibulæ* are of the same type as are shown in BM., Plate LXXX, and add nothing new to what was already known of them. Perhaps a fragment of a rather heavy fibula, with bosses ornamenting it instead of the more usual rings, is worth mentioning.

[1] *See Quarterly Statement*, 1902, p. 228.

One fibula had had a curious history. The pin had broken off in its owner's lifetime, and he had endeavoured to adapt it as a fastening of different form by bending the back into one ring and the pin into another, and looping the two together (Fig. 5).

The *rings* are single loops of bronze wire, some from their size apparently meant for finger or toe rings. One found in a cave is a loop of *twisted* wire.

Fig. 5.—Chain made from Broken Fibula.

Of *knives* I can produce but one specimen, it is 11·4 cm. long, having a flat blade, square tipped, with slightly concave edges and prominent shoulders; and a tapering flat tang, looped round at right angles to the plane of the face of the knife to form a handle.

Four magnificent copper *axe-heads* complete the series of objects under this heading of special interest so far discovered. One resembles B. MMC., No. 76, p. 38, except that its butt is square-ended, not pointed, and the form is more gracefully tapered. The edge is bevelled on one face only. Two others are of the same general type, but they are shorter, and the edges do not expand appreciably beyond the sides of the object: they are bevelled on both sides. The fourth, which is the finest of all, is 22·4 cm. long, with square butt, stop-knobs on each edge at the root of the tail, and stop-ridges on the faces, concave sides to the blade and a rounded edge, expanding slightly beyond the sides.

The half of a stone mould, for casting bronze axes, and the stump of a bronze awl or pin set in its original handle—a section

Fig. 6.—Bronze Awl (?) in Bone Setting.

of the shank-bone of some animal—call for notice under this heading.

§ V.—Iron Objects.

In excavating the pre-Israelite cities of Gezer we are working in remains of the bronze age, and iron in any considerable quantity is not to be expected. At all depths were found numerous small nodules of meteoric iron, perhaps preserved as amulets; but worked iron was confined almost wholly to the surface and to the outside of the city wall. The iron objects from outside the wall were all arrowheads, probably the relics of the siege of the city by Egyptians, or some other iron-using invaders; those from inside were nails, armlets, and nondescript fragments of any date, possibly modern.

The only exceptions to this law of the distribution of iron were:—(1) A distorted iron bracelet, from a depth of 2 feet. (2) The blade of a knife, much corroded, from $3\frac{1}{2}$ feet. (3) Fragment of a large nail, from a depth of 5 feet. (4) Fragment of an arrowhead, from a depth of 5 feet.

In a country almost destitute of earthworms, the blame of depositing iron objects among bronze age remains cannot be laid on those disturbers of archæological strata; but it is nevertheless possible to give a reasonable explanation of all these intrusions. The first two might easily have been brought down by the burrowing of moles, whose operations extend all over the tell. The third might have dropped over the edge of the pit from the surface during the excavation—like a small Maccabean coin which asserted itself at a depth of 10 feet associated with Neolithic walls! —and the fourth might have been shot in the town by the invaders who left the arrows outside the walls.

§ VI.—Bone Objects.

Unworked.—Many animal bones were found throughout the trenches. None (like the hippopotamus bones from Tell el-Ḥesy) were at all exceptional or unexpected; all belonged to the animals which are still commonest in the district. In large numbers were camel, sheep, cow, horse, and ass bones; less common were those of gazelle, dog, and jackal; rarer still—no doubt on account of their minuteness and their perishable nature—were those of the rodents, hare, jerboa, and rat. The wild boar was represented by

one tusk. Unworked bird bones were rare, for a reason similar to that accounting for the scarcity of rodent bones. A good many bones of tunny and other fish, no doubt brought up for food, were discovered, as well as the shells of *cardium*, *buccinum*, *murex*, and *bulimus*. These shells were nearly all perforated for suspension, and worn either singly (perhaps as ornaments, more probably as charms) or in strings. Two groups of shells, one of *cardium* the other of *bulimus*, were found—no doubt in each case the disintegrated remains of a girl's necklace.

A curious hoard of cow-bones appeared near the southern end of the first trench. They were all fragments of the long bones, and had been cut by some sharp instrument, obliquely or longitudinally, apparently for the extraction of marrow. Yet the bones themselves showed no sign of having been subjected to heat, and I could not satisfy myself at all that they had been cooked. When examining these remains I was reminded by them of the extraordinary ancient Arab orgy described by Nilus and discussed by Professor Robertson Smith,[1] in which a camel was slaughtered in sacrifice to the morning star at the moment of the rising of the planet, and devoured by the sacrificers—flesh, skin, and bones—before its rays were lost in those of the sun. It seemed as though this cow had been hacked up and devoured in the same summary manner.

Worked Bones.—There is nothing of importance that is new to add to the list of bone objects; the types have all been anticipated in the excavations of the Shephelah tells. Styli, like those figured BM., Plate LXXVI, Nos. 1–12, hold out hopes that tablets may some time be found. Several specimens of the curious tally-like slips of bone (*see* BM., Plate LXXVI, Nos. 19 *a–t*, 19) have also been unearthed. In the work quoted it has been suggested that they may be the pieces used in some game analogous to dominoes; but it is perhaps more likely that they were ornamental slips for inlaying, as, for instance, into the hilt of a bronze sword. Such slips have been found in Denmark and elsewhere *in situ*. To a similar purpose are probably to be assigned the minute pieces of polished shell, about a quarter of an inch square, which appear very frequently. These I would compare with the pieces of mother-of-pearl inlaid into the ornamental woodwork manufactured in the modern workshops of Damascus or Cairo.

[1] *Religion of the Semites* (2nd ed.), pp. 338 *et seq.*

Other bone objects calling for notice are a slender pin (Fig. 7, *a*) made of the bone of a bird, with a simple decoration scratched at one end; a small circular ornamental pin-head (Fig. 7, *b*); a minute

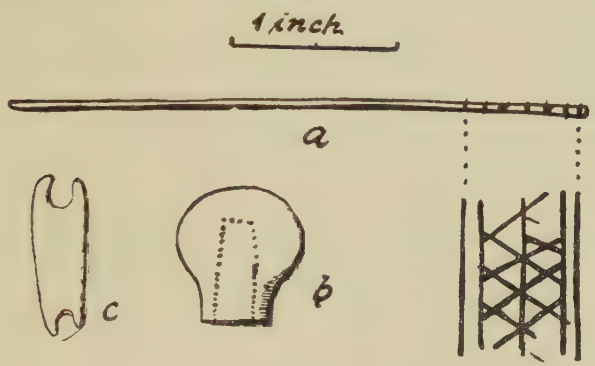


Fig. 7.—Bone Objects.

fragment with a sharp point, possibly a plectrum for plucking the strings of a musical instrument, and a small slip of bone, nicked at both ends, possibly part of the fastening of a dress (Fig. 7, *c*).

§ VII.—Pottery.

So much has recently been written upon Palestinian pottery that it might be thought almost impossible to add to the subject. But the results even of the short period of excavation now completed lead me to expect that by the Gezer excavation the theories current regarding Palestinian pottery will be both modified and enlarged. At present, however, I need indicate the more important of the actual results of the last two months' excavation only; when the firman has expired the time will come for a full discussion of the lessons taught by the mound in this and other branches of archæology.

Types.—These are almost uniformly early; examples of nearly all the varieties of vessels figured in BM., Plates XXIII–XXV, have been found, not only deep down, but on the surface. In the upper strata a later admixture is easily detected by the presence of such types as BM., Plates XXX, No. 3; XXXI, Nos. 2, 19; XXXII; XXXIII, No. 1; XXXIV, No. 9. In connexion with what has been said in a preceding section respecting the relation between Gezer and Lachish, it is remarkable that the most characteristic

and frequent types of pottery have proved to be those peculiar to Tell el-Ḥesy. Such are BM. XXIV, No. 1; XXX, No. 4; XXXI, No. 1; to which may be added the peculiar drain-pipe-shaped object, B. MMC., No. 231, an earlier variety of which appeared in the third city at Gezer (Plate IV, Fig. 1). Of the "cup-and-saucer" jar-stands, so common apparently at Tell el-Ḥesy, but of which one fragment only appeared, so far as I can recollect, in the Shephelah tells, one specimen has already been found.

A common form of vessel is a flat circular tray, with raised rim and small holes impressed or picked with a stick on the under surface. This I believe to have been for baking, the holes being intended to allow the heat of the fire to penetrate the tray more easily. The neck of a jar, shaped like a long cylinder, was found that, if it were in proportion to the vessel to which it once belonged, would indicate that the latter was at least five feet high.

Details.—Several hitherto undescribed details have been found. Prominent among these is what I may term the *pillar-handle* and *pillar-strainer* (Plate IV, Figs. 2, 3). They are not absolutely new, for specimens were found in the Shephelah tells; all, however, were fragmentary. No jar has yet been found with either of these features *in situ;* it is quite evident, however, that the pillar handle rose more or less vertically from the shoulders of the jar, parallel to the neck, to which one side of the conical cup, that may be likened to the "capital" of the pillar, was attached. The pillar strainer differs only in two holes being pierced through the attachment of the "capital" and the neck of the vessel, by which liquid could be poured into the receptacle. It is quite evident that the apparent spouts often found on vessels (*e.g.*, BM., 49, 3) are in reality of the nature of bottle fillers, with narrow orifices for straining out impurities in the liquid.

A restoration[1] is attempted in the annexed drawing (Plate V) of a singularly interesting vessel, of which some six or eight fragments were found. It must have been of considerable size, with a mouth about a foot, more or less, in diameter. There were two bold handles, right-angled, ornamented on the back with deep grooves. The lip round the mouth was heavily moulded; the fractures showed that the moulding concealed a channel or tube

[1] Evidence for all the details shown in the drawing remain on the fragments, except for the raised collar round the strainer, which, however, was an obvious necessity. No fragment of the lower part of the vessel was recognised.

running inside, right round the mouth. This tube had two orifices: one, in the shape of a cup with strainer bottom, at the attachment of one handle; the other, in the shape of a spout moulded into the form of a lion's head, at the attachment of the other. The wine, or whatever liquid was stored in the jar, was evidently not poured in at the wide mouth but at the strainer, and ran round the tube and out at the lion's head. The jar is a remarkable example of impractical ingenuity, for a cloth stretched over the mouth would have served the purpose better, and with less trouble.

Ledge-handles (compare BM., Plate XXVI) appear of all shapes and sizes, including the form of a horizontal, flat, rectangular tongue, which has not hitherto been illustrated. In one very curious jar the ledge-handle had developed into a frill completely surrounding the neck.

Of ornamental *combing* and *burnishing* some fine examples came to light. A good specimen of the former will be found on Plate IV, Fig. 4. Among the latter a considerable number of fine *white* burnished stands must be noticed. In addition to their colour they had a remarkable peculiarity. When the imitation of cords, so common in early Palestinian pottery, appeared on these fragments, it was always incised, never (as is more usual) in relief. Such imitations of cords, of all the patterns figured in BM., Plate XXVIII, are very common at Gezer.

Potters' Marks.—The few *stamps* are all Egyptian, and properly belong to the subsequent section on *Communication and Trade* (§ VIII). The rest of the marks are all to be classified under the following heads: (1) *Finger-marks*, usually those of the index finger, though the thumb is not uncommon, and the little finger is sometimes found: generally impressed on the upper surface of the handle at its upper attachment, though occasionally (two examples) inside the mouth of the vessel opposite the upper attachment of the handle, and rarely (one example) on the *under* surface of the handle at its upper attachment; it has also been found over the lower attachment in one or two specimens. The prints are usually blurred, and it is extremely rare that a good impression of the papillary ridges of the potter's finger-tip can be found. The impressions are generally single, but sometimes two finger-prints are found, either side by side or one over the other. (2) *Punch-marks*, which may be either simply the end of a stick impressed

once (common), twice (occasionally), or four times (one example) on the back of the handle; or else some very elementary device, such as a circle, or a cross in an oval. In one curious example the mark, so far as I could make out, was impressed with a complicated knot on a piece of cord. (3) *Nail-marks*, traced either actually with the nail, or more commonly with a stick. The marks are all very simple. The plain cross of two lines, shaped sometimes like a Latin cross, sometimes like a Greek cross, and sometimes like the cross of St. Andrew, is by far the commonest. Then come such combinations of lines as these :—

which may be compared with the nail-marks figured in BM., Plates XXIX, LVI. There is, however, one important difference. There is nothing that can safely be compared with any of the letters in the Old Hebrew or Phœnician alphabet, if we except the cross and Nos. 8, 12, which might be equated with ת, ד, and כ respectively. I do not think, however, that such a comparison is justifiable, as the similarity may be a mere accident; if Phœnician letters were to be found among these nail-marks, they would appear in greater numbers. The proportion of potters' marks found at Tell el-Ḥesy comparable with letters of the Phœnician alphabet is considerably greater than at Gezer.

Moulded Decoration.—This is rare in Palestinian pottery, if we exclude spouts and handles in the shape of animals' heads. I can bring forward two examples of a different kind—a potsherd with a sheep or some such animal in relief upon it (Plate IV, Fig. 5), and a jar-handle with the figure of a snake creeping upon it (Plate IV, Fig. 6).

Coloured Decoration.—The contrast between the Gezer-Lachish group of antiquities and those of the Shephelah tells is nowhere more strongly emphasised than in the department of coloured pottery. The peculiar patterns, fully illustrated in BM., Plates XXXVI to XLII, so especially characteristic of Tell eṣ-Ṣâfi, are at Gezer very meagrely represented, which seems also to have been the case at Tell el-Ḥesy. They are not wholly absent, however, and, being found sometimes in the very lowest strata, must have developed earlier than had been previously supposed. On the

other hand, there is a different style of painting, found in some examples at Tell el-Ḥesy, entirely unknown in the Shephelah tells, which has reappeared in Gezer. The difference between the two styles is well illustrated in the treatment of the bird figure in B. MMC., Plate LXII, as compared with that in BM., Plate XLIV. The first is drawn in broad lines—almost in wash—the second in narrow lines; in the first the whole outline is filled in with stripes of a different colour, in the second the outline is left open; the first is essentially polychromatic, the second essentially monochromatic: for though two colours are often employed together in the Shephelah painted pottery, it is by no means in the most typical examples.

The fine painting of a fish, reproduced on Plate IV (Fig. 7), gives us the first example of what I may for the present call the Tell el-Ḥesy technique, found since the excavation of that mound was closed, and also presents us with an entirely new motive in the colour decoration of Palestinian pottery.

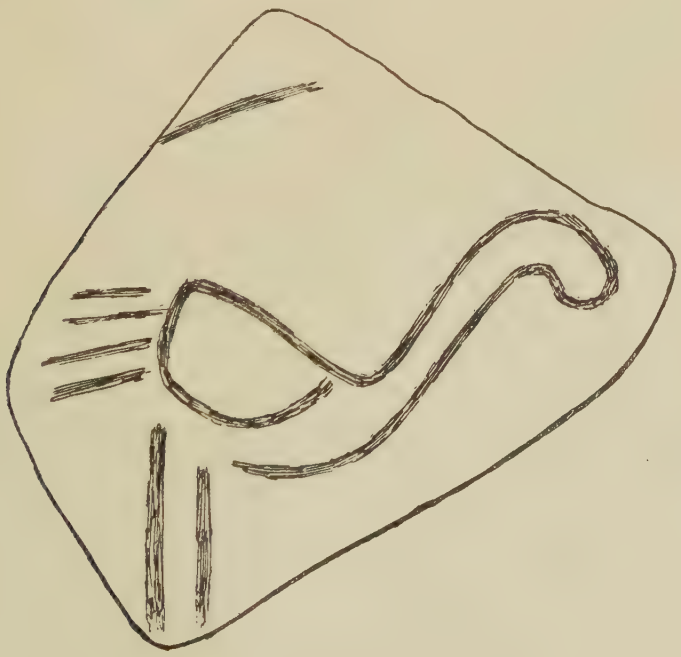


Fig. 8.—Sketch of an Ostrich on a Potsherd.

The geometrical patterns show the same difference. Compare any of the examples on BM., Plate XXXVII, with B. MMC., Plate LXIII, No. 109. The Shephelah artists painted two parallel zigzags side by side, of the same colour, and then left them. The Tell el-Ḥesy artist went a step further, and fitted in a third zigzag in a different colour, filling up the space between them. The illustrated example of geometrical pattern in coloured ware (Plate IV, Fig. 8) shows a similar characteristic. A Shephelah artist would certainly have been satisfied with outlining the pattern; the Gezer artist has attempted, by filling in the outlines, to supply a background.[1] A much ruder and more primitive style of art is illustrated by the picture of an ostrich sketched in red lines on the potsherd here represented (Fig. 8, p. 337).

Miscellaneous.—I may mention a curious sherd with scratched ornament, evidently made with some sharp instrument after the vessel was finished and fired (Plate IV, Fig. 11); a small jar (Fig. 9, p. 339), its upper half ornamented with groups of small dots apparently picked on with a comb; and a curious little vessel with strainer bottom, a fragment of which was found (Plate IV, Fig. 9).

A collection of circular discs of sun-baked mud, about 8 inches in diameter and 1 inch thick, was found close to the rock in the first trench, associated with buildings of the first or second city. About eight or ten were unearthed. They are more like children's mud pies than anything else, and I am not disinclined to believe that this is what they actually are, though it is of course open to anyone who considers such an explanation too puerile to regard them as votive models of lectisternial oblations analogous to the shewbread of the Hebrews.

In BM., Plate LXXVIII, will be found a spindle-wheel cut out of a disc of pottery, no doubt once part of the side of a vessel. Other examples of such a secondary use of pottery appear at Gezer. One specimen (Plate IV, Fig. 10) having two holes must be a button. Other small discs of pottery, evidently cut down from broken sherds, but without holes, have been found; these are also probably buttons, or rather the cones of buttons, cloth being wrapped round them. I assign a large number of pebbles,

[1] The cross-patching in these two drawings represents a dull brownish-black, very different from the glossy black of the Shephelah designs. The vertical lines denote red.

apparently water-worn and brought up from the sea, some of which are found nearly every day, to a similar purpose.

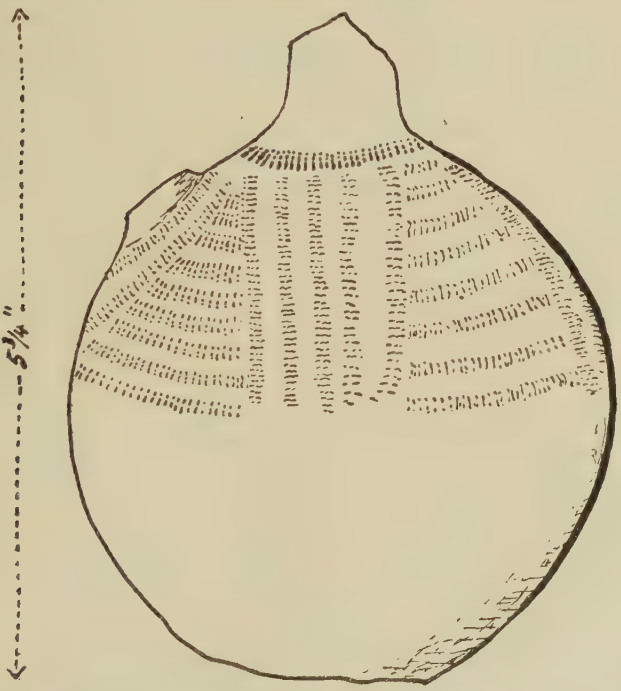


FIG. 9.—Sherd of Jar with Dot-ornamentation.

Stamped Jar-Handles.—Besides the Egyptian handles to be described in the next section, I must mention a number of Hebrew and Greek handles,[1] found by the workmen or by myself scattered over the surface of the mound.

The Hebrew stamped handles are four in number. They are all in a very bad state of preservation, and add nothing new to this much-discussed class of objects. All are "Royal stamps," one bearing the town-name *Hebron* with the flying disc; the others the name of *Socoh*—two with the disc, the third with the scarabæus.

The above account of the pottery is exclusive of the food-vessels from the burial cave, which will be described with the account of that important discovery.

[1] [Mr. Macalister has already found over 40 Greek stamps, a complete list of which will be published in a later number of the *Quarterly Statement*.]

§ VIII.—Communication and Trade.

As might be expected, the great majority of objects of foreign provenance are Egyptian in origin. The Egyptian objects consist exclusively of jar-handles with scarab-seals impressed on them, scarabs, and the impression of a scarab on a fragment of hard, black pottery. The small amulet figures, fairly common on the Shephelah tells, are notably absent from Gezer; a very minute and quite unrecognisable fragment of a paste figure, covered with blue enamel, was the solitary indication of the possibility of such fragments still lying buried in the tell.

These various seals and scarabs are collected on Plate VI.[1] No. 1 shows a pattern of spirals, such as is characteristic of about the twelfth and thirteenth dynasties. Nos. 2, 3 belong to about the same period, in which scarabs showing the field ornamented with symmetrical but meaningless arrangements of figures are common: notice the rude representation of the flying scarabæus[2] at the bottom of 3. No. 4 is worn and difficult to make out. It represents a man walking, holding something in his hand. No. 5 on the same plate represents the irregular fragment of black, hard clay just referred to, bearing an impression from a scarab. It allies itself in style and date to jar-handles 2, 3.

Nos. 6–11 represent the scarabs. No. 6 is plain, of blue enamelled paste. No. 7 is of white slate; its device is a curious steatopygous figure seated on a chair. No. 8 is a scaraboid of bone from the surface of the Western Hill, apparently later in date than the rest; the style seems comparable with eighteenth dynasty work. No. 9 is a magnificent scarab of diorite, bearing a singularly realistic group of a lioness and crocodile. This scarab is unfortunately chipped at the end. No. 10 is a small and neatly-cut scarab of jade, which has also been chipped. It seems to have borne a horse cut upon it, but nothing is left except the ends of the legs and the tip of the tail. No. 11 is a small fragment of an amethyst scaraboid; of the device two small circles, having dots at their centres, alone remain. All the scarabs and Egyptian stamps were found in the upper strata.

[1] [For Professor Petrie's remarks, *see* p. 365.]

[2] Scarabæus = the living beetle; scarab = the figure of the beetle in stone, &c.

In Fig. 12 is shown a rude clay cylinder, the existence of which indicates a direct or indirect trade with Babylon.

The rude seal of limestone, Fig. 13, with the figure of a stag, is probably Canaanite. A similar seal, with two stags back to back, was found at Tell Zakarîya,[1] and the impression in clay of a third seal, also engraved with a stag, was picked up on the surface of the present tell.

Other sporadic evidences of foreign trade, at various periods, have been found. They consist of: (1) The mouth of a small jug of burnished brown ware of a well-known Græco-Phœnician type characteristic of Cyprus; (2) several small fragments of painted ware of the type associated with Mykenæan civilisation; (3) a small sherd of an Athenian black vase, found at a depth of 2 feet 6 inches.

§ IX.—Religion and Folklore.

Besides the *massebôth* and the *temenos*, reference to which has already been made, several illustrations of the religion and superstitions of the Gezerites have been unearthed. These consisted of figures and amulets.

Figures.—The oldest and most interesting was the rude *teraph* from the burial cave, still to be described. The only other human figures were examples of the well-known type of undressed female divinity with lotus flowers, in low relief, on a terra-cotta plaque (as in BM., Plate LXVI, Nos. 10–16; LXVIII, 1, 2. *See* also Fig. 10). Fragments of four of these have been found. A fifth was long ago found by Mr. Bergheim on the tell; it is figured in the Survey *Memoirs* (vol. ii, p. 439), and in Professor Clermont-Ganneau's *Archæological Researches* (vol. ii, p. 242).

Fig. 10.—Head of Goddess Figure.

As in the Shephelah tells, several fragments of statuettes of the cow divinity were found. In one of the pits the four legs of such a statue appeared in different places, as though it had become

[1] *Quarterly Statement*, 1899, Pl. VII (facing p. 106), No. 14.

accidentally broken, and its owner had thrown the pieces about. The head (Fig. 11, *a*) belongs to a different statuette.

FIG. 11.—Fragments of Statuettes of the Cow-divinity.

Numerous roughly-cut phallic objects in white limestone were scattered all through the accumulation. Less commonplace was the figure of a flat fish of the same material, from the third or fourth city—the stratification was a little uncertain. This is suggestive of Atargatis-worship, of which, it will be remembered, evidence was also found at Tell Zakarîya.

Being in white limestone, these objects would seem to support the interesting theory of Dr. Winsch, set forth in the important account of the Tell Sandaḥannah tablets, contributed by him to BM.—namely, that white limestone had some special esoteric meaning for the natives of Palestine. But it is worth remembering, perhaps, that limestone magical tablets are not confined to Palestine,[1] and that at least one imprecation-document written on a plate of lead was found two or three years ago at Beit Jibrîn.[2] Palestine is practically made of white limestone, and this, being the commonest material found there, is less likely to be invested with mystery, for it is to strange not to familiar objects that mankind ascribes esoteric characteristics. Moreover, being so

[1] A hoard of 1,200 magical tablets on limestone was found at Biere, Saxony, and are now in the museum at Quedlinburg; *see* my *Studies in Irish Epigraphy*, vol. ii, Appendix.

[2] I was shown at the time a fragment of this tablet, which was about the size of a man's hand, and closely written with Greek characters. The man into whose possession it had fallen demanded not less than two Napoleons as its price. He told me that it was originally five times larger, but that he had torn it in pieces, because he could get as much from tourists for each fragment as for the whole tablet when perfect. This is a typical example of what is going on daily in Palestine.

common and so soft—it can be scratched with a finger nail—it is at once the cheapest and the most easily worked material to be found, and it is exactly these two qualities which are the most likely to appeal to a Semite, even when he is engaged on so serious an operation as cutting out a household god, or invoking malediction on someone who has got the better of him.

As a matter of fact, when making *amulets*, it was black slate which was the favourite material. A good many such were found, either oval, rectangular, or sinker-shaped, generally flat, and always perforated for suspension (*see* Fig. 12); with these prophylactics must be classed the metacarpal bone of a kid, pierced like a button with two holes, which was found in the burial cave; and also, probably, the perforated shells which have already been referred to.

Fig. 12.—Amulets in Black Slate.

§ X.—Miscellaneous Objects.

A few objects remain which cannot conveniently be classed under any of the above heads.

Food.—Cow bones, split for marrow, have already been mentioned. Several hoards of burnt grain—wheat and barley—no doubt relics of conflagrations in the granaries, have been found. (Traces of considerable fires are very common throughout the strata, but so far no uniform layer of ashes, such as I expected to find resulting from the destruction of the town by the father of Solomon's Egyptian wife, has made its appearance.)

Dress.—The processes of making clothing are illustrated (1) by the ubiquitous spindle-whorl, of which some curious examples have been found in clay, slate, limestone, jasper, and bone; the commonest form at Gezer is a plain, unpolished limestone ring; (2) by weaver's weights of more or less compact brick, or else of pebbles and stones perforated. The pyramidal or conical form of brick weight is exclusively found; none of the spherical weights, so common at Tell Zakarîya, have appeared. As is natural, they are often discovered in groups of a dozen or two.

Animal Figures.—Beside the cow figures mentioned in the last section, I may refer here to the very curious horse-head (Fig. 13, *a*), as well as to the head of a snake in pottery, and the figure with breasts (?) and goat's horns (Fig. 13, *b*). Fig. 13, *c*, is probably a toy.

FIG. 13.—Animal Figures.

A limestone bar, apparently cut into the similitude of a snapping dog (Fig. 14), from the first city, may *possibly* be natural, as the limestone nodules here sometimes take extraordinary shapes, which it is difficult to distinguish from human workmanship.

Weights.—Three stone weights require special mention. The first is of porphyry (17·125 grammes); the other two of quartzite (31·825 and 45·39 grammes respectively). The porphyry weight is spindle-shaped; the lightest quartzite weight is the frustum of a cone, inverted; the third is of a similar shape, but with a domed top.[1]

[1] [For Professor Petrie's remarks, *see* p. 365.]

Gold, Silver, and Lead.—Gold was represented by a minute annulet, 4 mm. in diameter, by a slip of gold leaf wrapped round a fragment of bronze wire and ornamented with a fern-leaf pattern indented on it, and by a small ear-ring. In silver I have to record the needles, already mentioned in § IV, and a few bracelets. Lead was represented by a disc about the size and shape of a halfpenny.

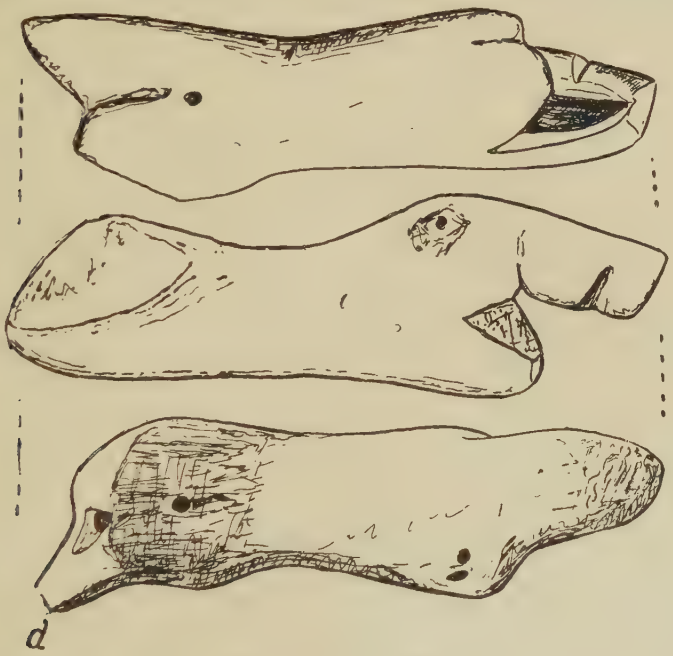


Fig. 14.—Animal Figure.

§ XI.—Rock-cuttings and Tombs.

Careful enquiries have been prosecuted among the workmen, some of whom have had experience of tomb-robbing, in order to find out whether any special methods are followed by the fellaḥîn in their illicit search for tombs. It will be interesting to state the results of these enquiries, the truth of which, of course, remains to be tested.

The fellaḥ, accustomed all his life to the changing aspects of one particular set of hillsides, is naturally at a great advantage compared with the traveller who encamps in the district for, at most, a year

or two. The former has by experience discovered certain indications of the probable existence of ancient tombs. The simplest and most obvious one, the tops of rock-scarps, appearing above the surface of the ground, which may be rock-faces containing the vertical doors of tombs. They may, of course, be also the sides of quarries or olive-presses, or merely a natural formation; this is settled by a little digging. I am assured that it is always regarded as a good sign if the foundation of a built wall appears above the ground, butting at right angles against the face of the rock.

If all these surface indications have been tested—and nowadays it is difficult to find a piece of rock-scarp that has not been tested—there remain others, less obvious to the traveller. The fellaḥ keeps his eyes open in early spring and late summer, and notices where the grass and weeds become green the soonest, and retain their green the longest. In the Palestinian hills, consisting as they do of rock with a thin coating of earth spread unevenly over it, a depression in the rock, which naturally contains rather deeper earth, is marked by more flourishing vegetation. These green patches are tested by sinking a crowbar: if it strikes rock soon then the depression is a natural hollow, or at most, an ancient olive press; if it sink deeper, and ring hollow when it at last strikes stone, the native knows he has found a tomb-shaft.

When we were at Tell Sandaḥannah we learned two further details from the Beit Jibrîn people, which are given here for what they may be worth. First, the tomb-shafts are said to be filled with earth rather whiter than the surrounding soil,[1] and so, when testing a place known to contain tombs, the fellaḥ scrapes and scratches here and there till he comes to soil of light colour, and then digs his shaft. Secondly, when a tomb has been found and robbed, the plunderer takes six paces to the side of it, and at the end of the sixth he sinks again, in the reasonable certainty of finding a second. If this prove unsuccessful six more paces in the same direction is almost certain to lead to another tomb.

There must be a large cemetery round so extensive a city as Gezer, and the few tombs that I have found to be rifled are not sufficient to account for all the inhabitants it must have contained. Much damage has been done in recent times near Kubâb, Silbît, ʻAmwâs, and other places in the neighbourhood, but these are too

[1] Perhaps due to fragments of limestone chippings remaining after the original quarrying-out of the tomb chamber.

distant from the tell to have been the burial-places for the Gezerites. The analogy of Tell Sandaḥannah leads me to expect to find the city cemetery on the slopes of the tell, or of the hillsides immediately adjacent. Hitherto I have not been able to spend more than a couple of days in the search, with a certain proportion of the workmen, whom I directed to run trenches along the side of the hill over a prescribed area—the trenches being sufficiently wide, and sufficiently close together, to include any tomb-shafts that may exist. No tombs have yet been found, but the work has not been wholly unproductive. It gives an idea of the extraordinary way in which the hillside must be honeycombed with excavations of various kinds to consider that in the little area tested—not one-thousandth part of the area of the hill—I found four cisterns and a large cave of the Beit Jibrîn type, the existence of which has been quite unsuspected. This cave is, perhaps, an ancient burial cave, like that to be described in the next section, but possibly merely a cistern. As its exploration still requires a considerable amount of clearance, I shall send a fuller description with a subsequent report.

That in early times the dead were buried within the city walls is shown not only by the burial cave of the most ancient inhabitants, but also by the occurrence of skeletons among the house-walls of the upper strata. These seem to show that in late pre-Israelite (and early Jewish?) times the dead were buried, not only within the city, but even within the houses. There were no special grave deposits found with the skeletons. We have still, however, to discover the tombs of the Maccabean population.

Within as well as without the wall the hill was found to be full of cisterns. Some of these I am clearing out. The work is necessarily slow, and is not yet sufficiently advanced to report upon. I may, however, remark before passing from the subject for the present, that the results thus far have been quite sufficiently interesting to justify the outlay.

§ XII.—The Burial Cave.

About 140 feet south of the great city wall, in the first trench excavated, the workmen found an oval sinking in the rock-surface, its long axis lying about north-east and south-west, and between 13 and 14 feet long. Walls of the third city had been built over

and concealed it. On clearing out the earth, steps leading downwards (Figs. 15, 16) were uncovered, one by one, terminating in the foundations of a ruined wall that had been built across the mouth of a cave to which the steps gave access. This cave proved on examination to be artificially excavated, as pick-marks were visible on the walls all round. It consists of one chamber of a maximum length (east to west) of 31 feet, breadth of 24 feet 6 inches, and height ranging from 2 feet at the south to 5 feet at the east. There are two entrances: that with steps, just mentioned, at the south-west corner; and, at the east end, a shaft in the roof, which I afterwards opened, roughly circular, about 3 feet 6 inches in diameter, and stopped by a great stone, 5′ 5″ × 4′ 7″ × 8″ thick, lying on the surface of the rock.

It became immediately obvious, on entering the cave, that this was a very early and unrifled cemetery, and I therefore decided to clear it completely. This was most carefully done, and every shovelful of earth passed under my inspection, as I remained in the cave the whole time the workmen were employed in it. It will be convenient to give the results of this examination in historical order, rather than in the order in which each fact came to light.

On the accompanying plan (Plate VII) it will be seen that an area of perhaps slightly less than half the extent of the cave is marked off by a broken dot-and-dash line. This area was found to be covered with the ashes of burnt human bodies. The layer, which was spread directly on the rock floor, was not of uniform thickness, it was at least 1 foot thick at about 5 feet from the stepped entrance, and diminished rapidly to the border of the area where mere traces were found.

A little perforated ornament or amulet, made from the bone of a kid (Fig. 17), was found charred with the human remains. This had presumably been on the body of the person to whom it belonged, and burnt with it. From this I would infer that the bodies, not the bones merely, were cremated; and the general coherence of the bones showed that the cremation took place inside the cave. A further reason in support of this deduction will presently be advanced in the account of the human remains contributed by my father to this report.

The fire reduced the bones to a white ash at the place where it had been most powerful—namely, just inside the door of the stepped entrance opposite the left-hand jamb. For so strong a

FIG. 15.—Entrance to Burial Cave.

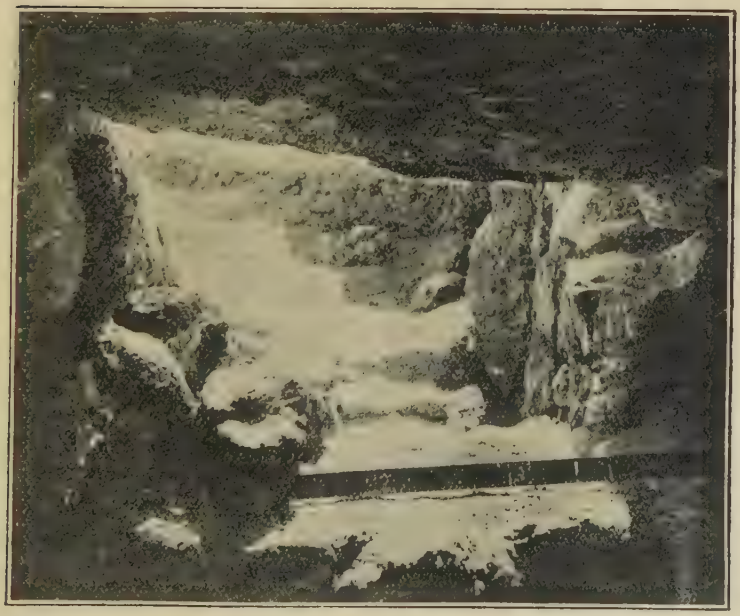


FIG. 16.—Steps to Entrance of Burial Cave, from the Interior.

flame a draught was required: and the method by which this draught was supplied is one of the most interesting features in the cave. Just under the roof of the chamber, all round, is a stratum of soft rock, which to the left of the doorway is about 2 feet in thickness. A narrow passage, 9 feet long, was cut in this stratum, and in its roof a conical chimney, 2 feet 5 inches in diameter at the bottom, 8 inches at the top, was formed. The interstices of the rock in the sides of the chimney still show traces of smoke-blackening: pick-marks in its wall show that it is artificial.

Fig. 17.—Bone Amulet.

The presence of this chimney in connexion with the burnt bones proves conclusively that we have to deal with an ancient crematorium, made for the purpose, and not with the traces of such a tragedy as that described in 2 Kings x, 25, in which Jehu slew the worshippers of Baal, which might otherwise be a possible explanation. That the bones were left just as they were burnt was shown by the regularity with which the intensity of the fire, as indicated by its effects on the remains, increased to a focus.

The people who used the cave as a crematorium were followed by others who employed it for inhumation. It is possible that these were the inhabitants of the third city. It seems most probable that the stepped entrance was the older, and that it was blocked up (by the wall whose foundations have already been mentioned) when the method of disposal of the dead was altered. This is shown by the fact that one of the rock-cut steps was found underneath the wall when I removed the latter. At this time, as a new entrance to the cave was thus rendered necessary, I believe the roof shaft to have been cut. The reasons for this alteration are obvious. The space occupied by the old entrance and the chimney shaft were required for building; and the roof shaft would not afford such easy access to the caves for dogs or thieves as did the staircase. The bones of a dog were found just inside the stepped entrance, showing that these animals occasionally found their way in.

It is possible that the cave was enlarged when reappropriated by the inhumating people, and that the area of cremation represents its original extent. Unfortunately the walls are so friable that they do not retain the individual pick-marks sharply enough to settle this question. Had the cave been cut in the soft, homogeneous clunch of Beit Jibrîn, which preserves every mark as sharply as the impression of a seal, an answer would have been found easily. In some caves at Beit Jibrîn it is possible not only to tell the exact nature of the tools employed, but also the probable number and approximate stature of the workmen, and even occasionally to detect evidence of such physical peculiarities as left-handedness.

The dead, in this second period, were deposited all over the floor, and (so far as could be determined) in a contracted position on their sides. No evidence of any attention to orientation was observable. The bones of different individuals were heaped upon one another, and the resulting confusion was greatly increased by the operations of rats, whose burrows extended in all directions.

Ranged along the wall were a series of enclosures, evidently the graves of persons of distinction. These are denoted on the plan by index letters. A and D each consisted of a platform of flat stones, laid together in regular order like the paving blocks of a street, about 8 inches above the rock floor of the cave, and bounded by rows of larger stones. In A there were two such rows, in D one only. E was similar, but it had no regularly paved floor; its area contained a disordered débris of stones, which I did not think worth while recording on the plan. Probably the boundary wall had been higher, and had fallen in.

The enclosure B, like E, had no regularly laid floor; but, unlike all the others, the stones by which it was bounded were cemented together with stiff mud. They were of larger size than the stones used in any other of the constructions in the cave, and they had evidently oversailed so as to meet at the roof of the cave. The wall had, however, fallen in on the eastern side. This accident must have taken place while the cave was still in use, as a large deposit of pottery had been placed *on* the ruins. There were no bones inside this enclosure. The Rev. Père Séjourné, Prior of St. Étienne, Jerusalem, who visited the excavation recently and saw the cave, told me that he had seen a similar enclosure within a cave at 'Aid el-Mâ.

Just east of B, against the wall, was an erection of flat stones (C on plan) raised about 1 foot above the floor of the cave, and measuring 3 feet 4 inches by 3 feet 10 inches. I can only describe it as being more like an altar than anything else, though I should hesitate definitely to assign such a use to it. Nothing was found on, within, or about it to indicate its purpose. Between D and E was a large quantity of sandy soil full of bone fragments.

The most interesting interment, however, was between A and B. Here was a paved platform, such as was also noted in A and D, on which was laid a large jar of coarse brick-red porous ware. It was broken, and must have been deposited in that condition, as the pieces were not found, though close by it were found sherds of another jar of similar type. Stones were built up round the jar to keep it in position; the boundary of the grave, however, had been disturbed, and lay, confused with the débris of the wall that had closed the entrance, in the middle of the floor. The jar contained a few bones, sufficient to show that the body of an infant who had died at or immediately after birth had been deposited within it. It is difficult to avoid the conclusion that we have here the remains of the victim of an infant sacrifice, probably offered when the cave was first adapted for burial. On no other hypothesis can the special treatment of this individual infant—one of many of the same age whose remains were found in the cave—be accounted for; and the remarkable discovery at Taanach of jar-buried children associated with sacrificial furniture is a piece of evidence in the same direction.

The interments in this cave were probably, roughly speaking, contemporary with the patriarchal interments in the Cave of Machpelah, and it is likely that the funerary rites and internal arrangements of the two places of sepulture were similar.

It is curious that a cross appeared to be cut on one of the stones of a wall by which the left-hand side of the stepped entrance had been brought to a fair face. But after close inspection I came to the conclusion that this might be a natural mark in the limestone.

Having now given the outlines of the history of the cave, as deduced from its examination, it remains to describe the deposits found within it. These are almost exclusively *human bones* and *pottery*.

The Bones.—By good fortune my father, Professor Macalister, of Cambridge, arrived on a visit to the excavations shortly after

the discovery of the cave, and he was present at its examination on all save the first two days. It has therefore been possible to obtain a scientific examination of the bones such as I would not have been competent to carry out unaided. The result of this examination he has drawn up in the following report:—

"*Report on the Human Bones in the Cemetery Cave at Gezer.*

"The human remains are in two series, burnt and unburnt. The former are the older, as they form a layer beneath the unburnt stratum, extending under the stone platforms on which the bodies buried in graves A and E had been placed.

"The calcined bones are the remains of a large number of persons (how many it was impossible to determine, as they were all broken and their fragments mixed) forming a solid stratum, in places over a foot in thickness. They had been trampled and spread when the grave mounds were built. The soft parts, as well as the bones, had been burnt, for fragments of burnt hyoid bones in the débris furnished presumptive evidence that at any rate the soft parts of the neck had been consumed. There seemed to be one centre of combustion, but its section showed that the fire had been successively renewed, probably at considerable intervals, as even here the bones were not equally burned, and strata of blackened bone alternated with masses reduced to a white ash.

"The remains were of persons of all ages. The bones of at least twelve newly-born infants were identified, scattered through the mass. There were also fragments representing more than a score of children between one and eight years of age, and about as many adolescents between nine and twenty-five years. The rest were adults. An attempt to determine the number of these, by collecting and classifying the fragments, showed that there were at least fifty, and probably even more, of both sexes, the females slightly preponderating.

"Neither skulls nor long bones were sufficiently preserved to be of use for measurement, but it was possible, by carefully grouping the fragments, to obtain some data for a general estimate of stature, and of cranial shape and size. From these observations it appears that the bones were those of a people of slender build and small, but not dwarfish, stature. None exceeded 5 feet 7 inches, and most were under 5 feet 4 inches. The limbs were slender but muscular, none of the humeri were perforated, a few tibiæ were slightly platycnemic, and a few femora platymeric, but none pilastered. The cranial shape was an elongated oval, fairly well arched longitudinally, but rather flat-sided, with a length-breadth index somewhere between 72 and 75. The skull bones were thick and heavy.

"This information is not sufficient definitely to correlate this ancient people with any of the known Mediterranean races. It certainly points to their being a pre-Semitic stock.

"The unburnt bones were in two series. The majority formed a more or less uniform layer spread out on the cave floor, over, and extending beyond, the area of cremation. A smaller number were laid on stone platforms within the several grave enclosures.

"The former represented a much larger number of adult bodies than the burnt series, with a proportional number of those of immature age; but their condition of comminution and scattering was equally unsatisfactory. The whole mass was riddled with the burrows of rats, and the cancellous parts of almost all the bones had been destroyed. From the observations and measurements taken, it was clear that these belonged to a race taller than the cremated folk. The average male stature was somewhere about 5 feet 6 inches (but some few rose as high as 5 feet 11 inches); the female stature was about 5 feet 3 inches. They were a stronger, larger-boned people than their predecessors, with pilastered femora, platycnemic tibiæ, and with the articular surfaces of ankle, knee, and hip, showing those increased areas of flexion which are associated with the habitual assumption of the squatting position when resting. Their skulls were larger, of thinner bones, distinctly pentagonoid, both when viewed from above and from behind. As nearly as we could estimate, the average length-breadth index $\left(\frac{\text{B} \times 100}{\text{L.}}\right)$ ranged about 78. The faces were longer, with fairly prominent noses and rounded chins. The teeth were large and well spaced. In one or two female jaws there was a tendency to alveolar prognathism.

"These general characters seem to correlate this people with the Semitic stock, rendering it probable that they were part of the earliest wave of Semitic immigration—that of the primitive Amorites.

"Of the bodies interred in the graves, those in A had been much disturbed, probably by the rats. There were fragmentary remains of at least three adult skeletons, which, in general characters, were indistinguishable from those of the unburnt stratum. One of these was certainly male, the other certainly female; of the third, only a few indefinite fragments were found. There were also the remains of two infants.

"In or near D were three crania—one nearly perfect, the second had lost its facial part, and the third was still more fragmentary. The first, of which photographs are appended, was that of a male adult about 30 years of age. Its length-breadth index is 75, height-length index $\left(\frac{\text{H} \times 100}{\text{L.}}\right)$ 78; index of jaw projection is 96, orbital index $\left(\frac{\text{Orb. H} \times 100}{\text{Orb. W.}}\right)$ 82, and nasal index $\left(\frac{n.\ \text{W.} \times 100}{n.\ \text{H.}}\right)$ 54. The skull is that of a Semite, probably of a better class than that of the ordinary Amorite fellah, although it shows one character which is sometimes regarded as one of inferiority—viz., a fronto-temporal suture in each pterion.

"The second skull is also that of a male, wider than the former at

FIG. 18.—Skull from the Burial Cave.

the parietal eminences, but narrower at the forehead; a symmetrically pentagonal, with a length-breadth index of 79·7. The third is metopic, but of much the same shape, with an index about 77.

"In grave D were the fragments:—(1) Of a male skeleton represented only by a few bones; (2) of a female whose skull was rounded, pentagonoid, with a broad short forehead, and an index estimated at about 78.

"There was no reason to suppose that those buried in the graves differed in race from those of the unburnt stratum.

"About five skeletons were found in a fragmentary condition at different parts of the city. These presented the same general characters as those of the unburnt stratum.

"ALEX. MACALISTER."

The Pottery.—Throughout the cave—in the bone débris on the floor, inside the grave enclosures, and built into the walls surrounding them—were scattered a large collection of food vessels of different kinds. As these were nearly all perfect, or almost so, the collection is particularly valuable for the study of the earliest pottery of Palestine. Drawings of the types are collected on Plates IX–XI.

Plate IX represents the earlier types, associated with the cremated remains. They are distinctly coarser in quality than the later vessels found in the inhumated stratum. Fig. 1 is a small jug with rounded base, flattened globular body, and wide mouth. The handle is broken; the stump shows that it was deeply channelled on the back, giving it a doubled appearance. Figs. 2, 3, are hemispherical bowls, roughly modelled with the fingers. Fig. 4 is a cylindrical cup with one handle, also roughly moulded, and burnt black. Fig. 5 may possibly belong to the later period—the stratification of the pottery was not always certain, and vessels deposited on the top of the burnt layer might have belonged to the bottom of the buried layer. The rudeness of the execution leads me to prefer the earlier date. It is remarkable for displaying ledge-handles, with two little additional knobs above each. Figs. 6, 7, are jugs with loop handles, and Fig. 8 is a rough expanding cup.

The vessels in Plate X, on which are collected the *uncoloured* specimens of the late types, are, on account of their large number and size, necessarily drawn to half the scale employed in Plate IX. Fig. 1 is a small jug or cup. Fig. 2 is a bowl, remarkable for having a curious and most inconvenient handle at one side—quite too small

to give a firm grasp, even when the bowl is empty. Fig. 3 is a very fine, large, spherical jug of burnished red ware. It has a flat bottom; two plain ledge-handles—on the upper surface of one of them three small dots are punched, possibly a potter's mark; a circular mouth; and a strainer for filling the vessel and at the same time purifying the liquid. It is plain from its shape and position that this could not have been used for pouring *out*. Fig. 4 is a flat-bottomed jug of red ware, burnished. Figs. 5, 6, are two small saucers, not calling for special remark; Fig. 11 is similar to Fig. 6. Fig. 7 is a bowl with straight oblique sides: just inside the rim are two small dots impressed which do not penetrate the side of the vessel. Two other bowls were found, similar to this, but with the dots perforated right through. Figs. 8 and 9 are ordinary bowls with rounded bottoms. Fig. 9 shows perforations like those in 7, penetrating through the side of the vessel. Fig. 10 is similar to Fig. 4, but the bottom is concave. Fig. 12 is a conical jug of drab ware, with expanding neck. Fig. 13 is a globular jug with wide mouth and flattish base: there are two ledge handles and also two ear handles. The two holes near the base, shown in the plate, have been made intentionally. Fig. 14 is a saucer with curiously heavy moulding round the mouth—drawn below the figure to a larger scale. Fig. 15 is a bowl resembling Fig. 2, in having a minute handle at one side, too small to be of any practical service. Fig. 16 resembles Figs. 6, 11. Fig. 17 is a hemispherical cup on a solid cylindrical base. Fig. 18 is one of the most interesting of all the pieces of pottery recovered from the cave; unfortunately it is very imperfect. The three fragments that remain show that it was a tray, probably for baking, studded on the upper face with little squat conical knobs, just enough of which remains to show that they were arranged in a spiral. Fig. 19 is a curious anticipation of the shape of a late Jewish cooking pot, but with flat bottom. Fig. 20 is an ordinary jug with plain ledge handles. Fig. 21 is a vessel that has lost its neck and mouth. On one side are two mamillary projections, which suggest comparison with the jars found by Schliemann bearing feminine characteristics.

Few words are necessary with regard to Plate XI, which represents a bowl (Fig. 1), a fragment of another (Fig. 4)—both with the two peculiar perforations already noticed—and two small jugs, ornamented with coloured decoration. This it will be noticed is

of a uniform type: the colour—dark Indian red—is also uniform. The patterns consist of simple groups of lines arranged in V, or in the Mycenæan pattern; one piece—the fragment (Fig. 4)—is interesting on account of the appearance of the zigzag, which plays so important a part in later pre-Israelite decoration.

The curious animal figure (which has been the handle of a jar) found just at the mouth of the cave, and illustrated in Fig. 19, is the only other piece (exclusive of the large jar containing the infant's bones) calling for notice.

FIG. 19.—Jar Handle, shaped as an Animal's Figure.

In order to complete this account of the food vessels a word must be added respecting the grouping of the pieces. A large number were lying about on the floor, without any special order or grouping being apparent. A few were built into crevices of the grave enclosures, always in groups of at least two, a jug and a bowl. The finest pieces were heaped together on the fallen stones inside the enclosure B. I endeavoured to obtain a photograph of this group by magnesium light before disturbing it, and was successful in getting a negative good enough for a record, though not sufficiently clear for publication. In the two photographic views (Figs. 20, 21) I have assembled together the principal pieces found within this enclosure.

The large jar containing the infant's bones (Fig. 22) is 2 feet 4 inches long, with flat base, inverted cone body, surrounded by a rope-moulding, gently curved shoulders, and mouth abruptly turned back. The shape allies itself with that of the fine jar from Tell es-Ṣâfi (BM., Plate XXIII, Fig. 1).

Other Deposits.—These were disappointingly few. They consisted of the singular limestone figure, $7\frac{1}{2}$ inches high, no doubt a rude *taraph*, represented on Plate IX; of a few perforated Venus

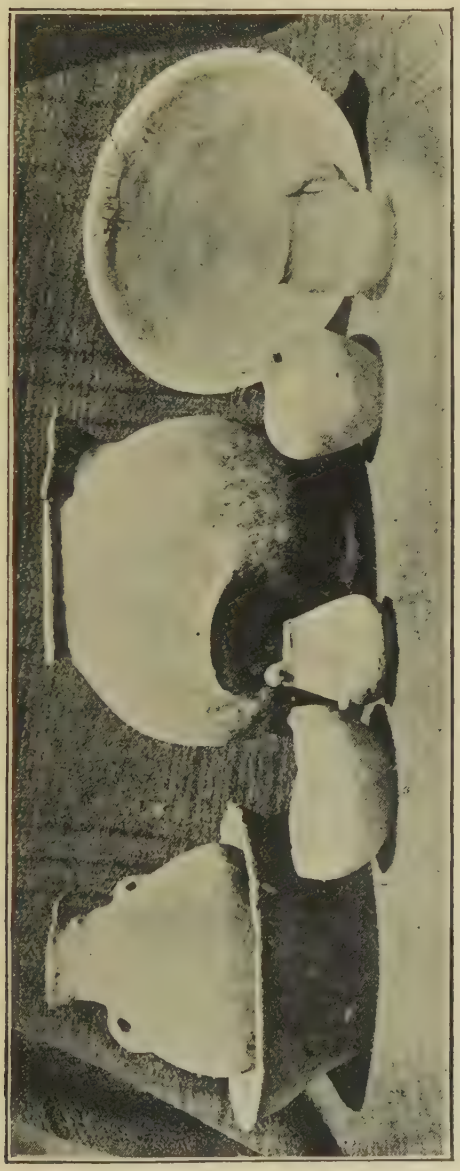


FIG. 20.—Group of Pottery from Enclosure B in the Burial Cave.

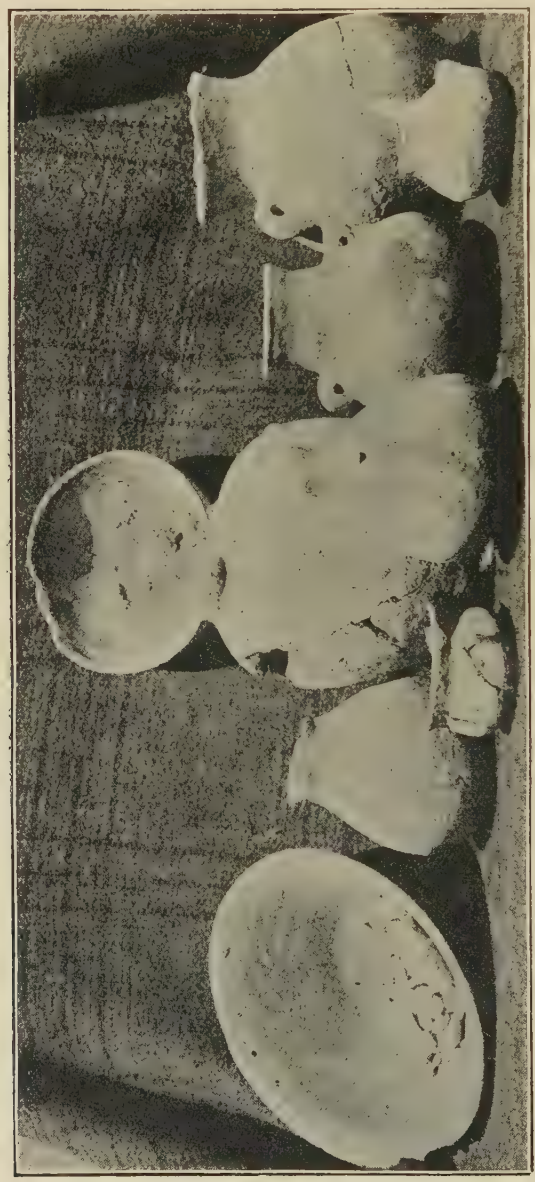


FIG. 21.—Group of Pottery from Enclosure B in the Burial Cave.

shells; of about half a dozen minute blue enamelled beads (found among the stones inside enclosure B); and of about 50 beads, consisting of small circular discs of polished agate and carnelian, with countersunk holes drilled through them.

FIG. 22.—Jar containing an Infant's Bones, from the Burial Cave.
(The rule in the photograph is 1 foot in length.)

It remains to speak of the surroundings of the cave, which were very suggestive (*see* the plan on Plate VIII, and the general view, Fig. 23). C, in the general view, is the stepped descent to the cave mouth. Behind the 5-feet rod that stands against the top step is a wall, probably independent of the cave, and a subsequent addition —the steps run partly under its foundations. At B is a standing stone or *massēbāh*, of the circular type already described, but finer than any other example yet found in the excavation. It is 2 feet in height, 1 foot 7 inches in diameter at the top, and about the same at the bottom, but swelling slightly like a barrel in the middle.

It stands on about a foot thickness of earth above the level of the rock. Between it and the steps of the cave, about midway (at A in the photographic view) is a cup-mark in the rock, 1 foot 1 inch

FIG. 23.—Surroundings of the Burial Cave.

in diameter and 1 foot 2 inches in depth. It seems reasonable to regard these as adjuncts, with some ritual purpose, to the cave in which the dead were deposited.

In the account of the "Rock Cuttings of the Shephelah," contributed to the new memoir (quoted as BM. in this report), I endeavoured to show reasons for believing that the columbaria of Beit Jibrîn and elsewhere were not Roman, but the work of a race of possibly aboriginal troglodytes who practised cremation, and that instead of the Romans having introduced columbaria into Palestine, it was possibly from these hypothetical aborigines they themselves had learnt this convenient method of disposal of the ashes of the dead. The weak point in this rather revolutionary deduction I felt to be the entire absence of literary or other evidence for pre-Roman cremation in Palestine: the case of Saul (1 Sam. xxxi, 12) is obviously exceptional; Amos vi, 10, is an obscure passage; and both references are clearly beside the point. It has now been established, however, by this cave at Gezer that cremation was practised at an early date by an aboriginal race in Palestine. There are still many links, both in time and in evolution, missing between the rude cave at Gezer and the elaborate columbaria of Beit Jibrîn, but I cannot help feeling that this discovery tends to corroborate the evidence I had already collected in favour of my views respecting the origin of the latter excavations.

In order to extract the food-vessels deposited in the crevices of the walls it was found necessary to demolish all the grave enclosures. They have, however, been restored to as nearly as possible their original aspect, and the cave will remain permanently open for inspection.

§ XIII.—The Surrounding District.

As time permits I am pursuing an examination of the ground-surface on the hillsides and in the valleys surrounding the tell in search for (1) tombs; (2) boundary stones; and (3) other remains of antiquity. I have not been able as yet to do much work in this important branch of the exploration, my time being very fully taken up on the tell itself; but such excursions as I have been able to make have not been fruitless. Some likely tomb-sites (within the area covered by the firman) have been noted. The most important remains found, however, have been on the western face of the hill to the south. Here I have to report the existence of (1) an alignment of stones, and (2) a stone circle, which are welcome additions to the scanty muster of rude stone monuments of Western Palestine.

§ XIV.—Summary.

In the foregoing report I have confined myself as far as possible to the statement of discoveries, and of deductions from them not likely to be overturned by future developments in the excavation. There are, besides, numerous conclusions at which I have arrived on different points which, being less final, have for the present been set aside. It may, however, be regarded as established that the Eastern Hill shows signs of four successive occupations:—(1) A pre-Semitic, probably neolithic race, who practised cremation; (2) an early Semitic race of the copper and early bronze age; (3) two later Semitic occupations, whose chronology as yet depends only on the evidence of scarabs—for there is not sufficient distinction between the pottery of successive strata to apply with certainty the "pottery scale," deduced from previous excavations. The chronological evidence of scarabs is notoriously untrustworthy, but it must be regarded as a hopeful sign (1) that all the scarabs appear contemporary, as well as the seals on the jar-handles; and (2) that no scarab has yet been found with the ring of Tahutmes III.

The Imperial Commissioner formerly attached to the Fund's excavations having resigned, on the ground of ill health, his place was temporarily filled by His Excellency Yusif Pasha el-Khaldi, at the commencement of the works, as interim Commissioner, and finally by the appointment of His Excellency's nephew, Sourraya Effendi. It would be ungrateful to fail to acknowledge the courtesy shown by both these gentlemen in the execution of their duties. I must also record the obligation which the Fund and its officers owe to Mr. Serapion Murad, administrator of the estate in which the tell stands, for giving freely every possible facility for carrying out the works. I have been requested by him to leave all discoveries of importance open, so that they may be permanently available for the instruction of students of Palestinian archæology.

DESCRIPTION OF THE SCARABS AND WEIGHTS.[1]

By Professor W. Flinders Petrie.

Plate VI, Fig. 7. Scarab, schist. Woman seated on chair with lion-shaped legs; hieroglyph reed *a* in front, and basket *neb* below. Probably about 2000 or perhaps 1200 B.C. Egyptian.

Fig. 8. Bone scaraboid. Palm tree; on one side the hawk-headed god, Horus; on the other side a crocodile-headed god, probably Sebek. In front of each a uræus serpent. On reverse a scarab beetle with a crocodile on either side. The style is most like that of about 2500 B.C., but it might come as late as 1200 B.C. Egyptian work.

Fig. 9. Diorite scarab. Lion on a crocodile, uræus serpent in front. Work probably Egyptian; about 1200 B.C., or perhaps earlier.

Fig. 11. The bit of amethyst scarab is characteristic of the XI–XIIth dynasty by its material. About 2500 B.C.

In the absence of all dating by the subject it is very difficult to date entirely by style without seeing the material and form. It would be quite possible for these to be all of one date; and if so I should rather suppose 2500–2000 B.C. The cylinder is Syrian work, which I cannot date.

Of the weights:—

(1) Spindle shaped, is a heavy example of the Assyrian shekel, on the double standard.

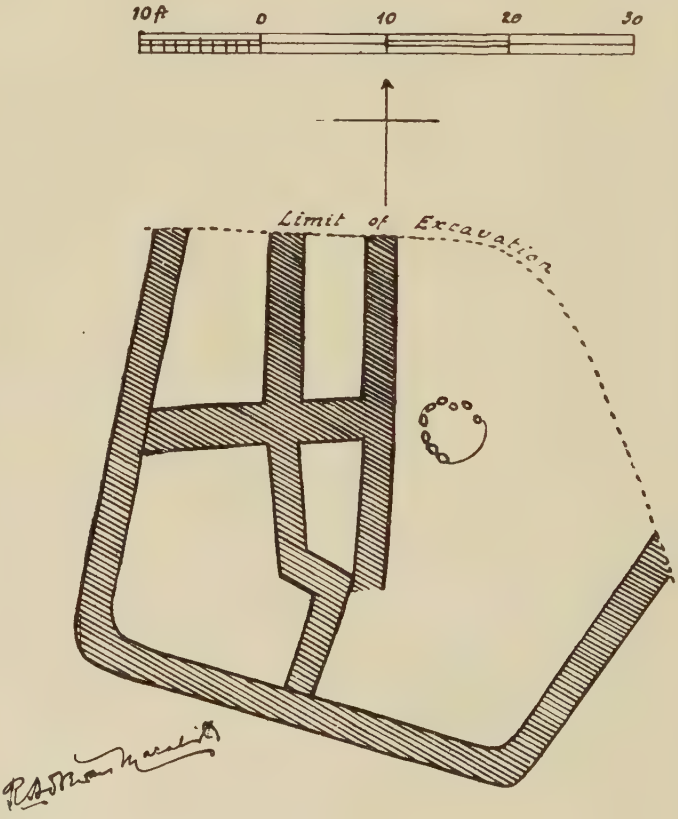
(2) Flat topped may be a light example of a 2 shekel Assyrian standard, on the double standard.

(3) Dome-shaped, is the Egyptian 5 kedet weight, rather light.

[1] *See* pp. 340, 344, §§ VIII, X.

EXCAVATION OF GEZER.

WALLS.



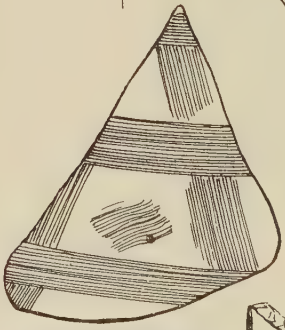
EXCAVATION OF CEZER

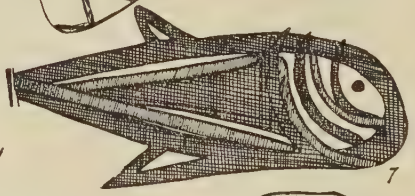
STONE OBJECTS

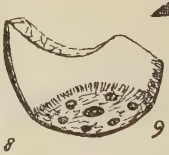
for dimensions of these objects, see the accompanying description.

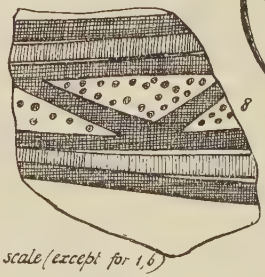
EXCAVATION OF CEZER.

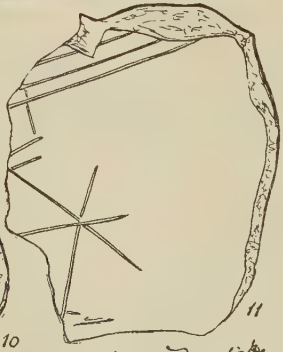
MISCELLANEOUS POTTERY







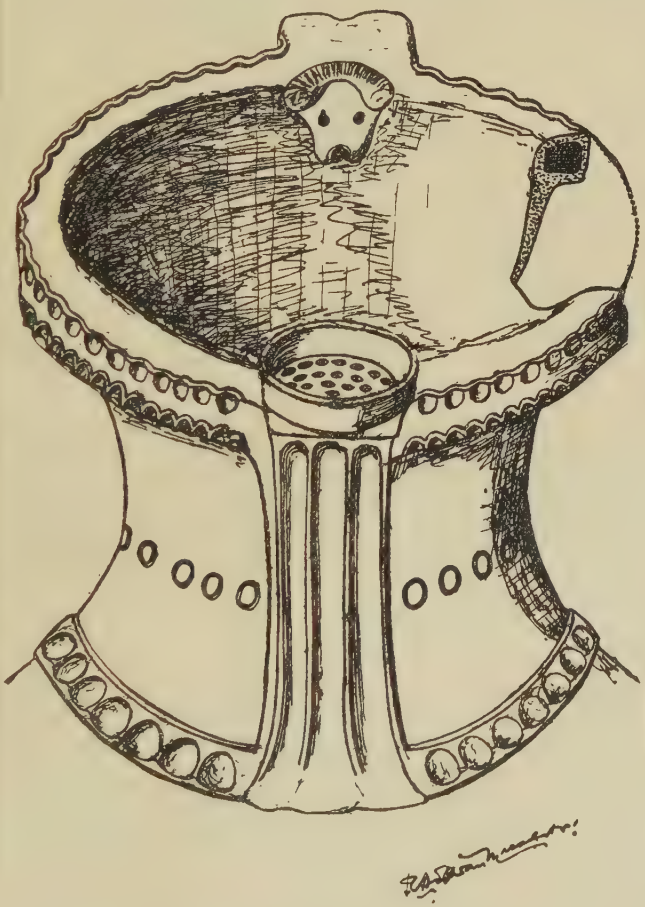




scale (except for 1, 6)

EXCAVATION OF CEZER

JAR WITH STRAINER DEVICE

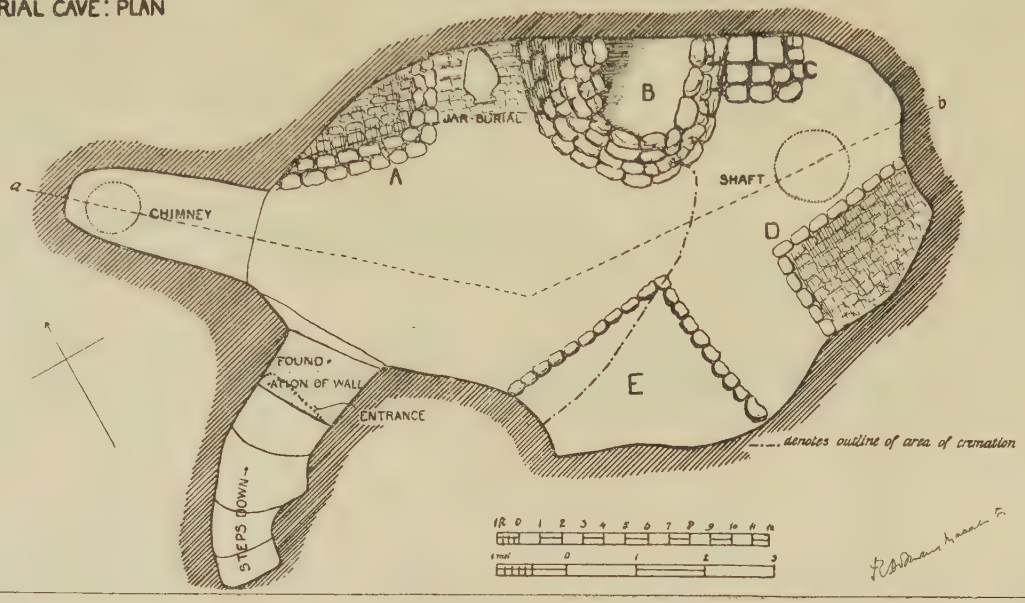


EXCAVATION OF CEZER

SCARABS AND SEALS

EXCAVATION OF CEZER

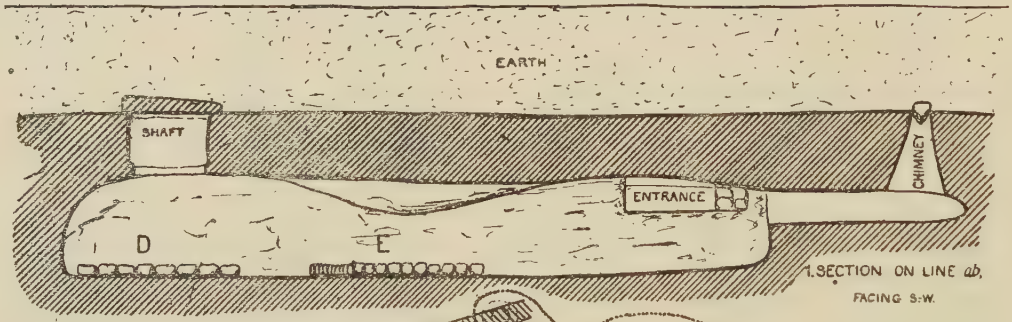
BURIAL CAVE: PLAN



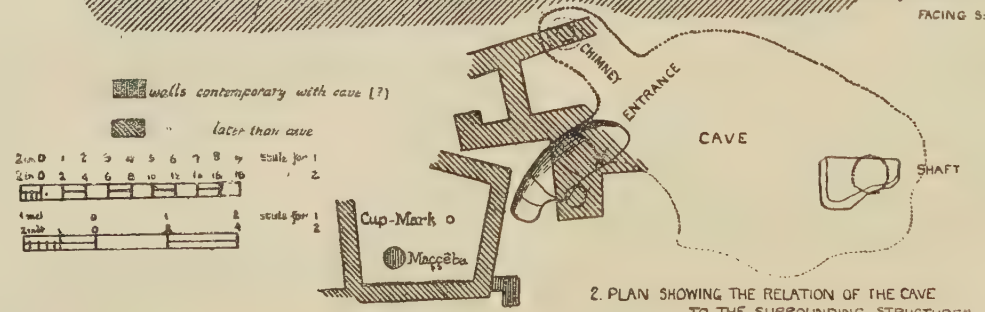
PALESTINE EXPLORATION FUND. PLATE 7.

EXCAVATION OF CEZER

BURIAL CAVE : SECTION &c.



1. SECTION ON LINE *ab*, FACING S.W.

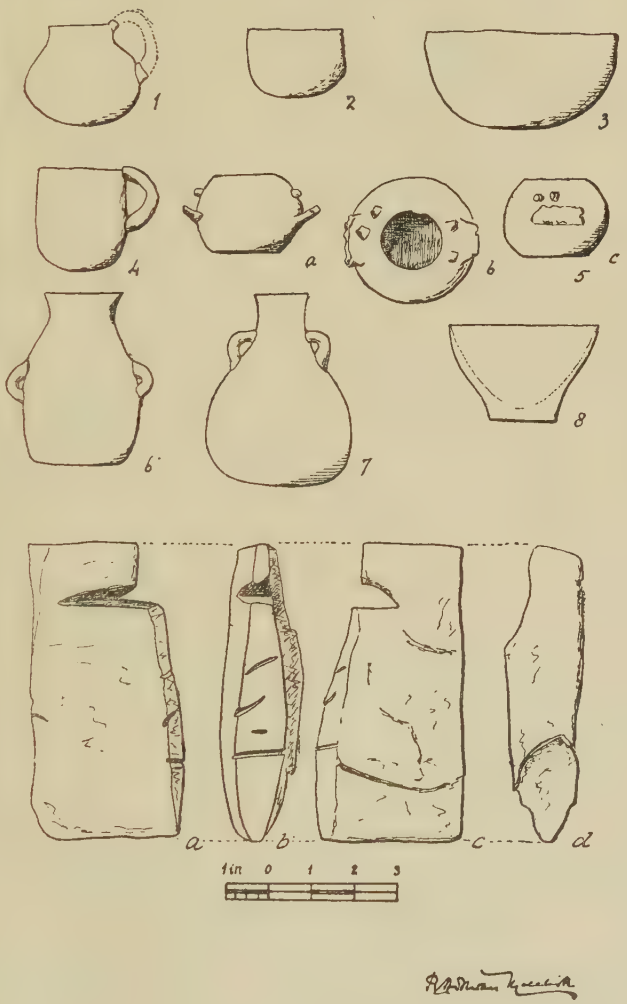


2. PLAN SHOWING THE RELATION OF THE CAVE TO THE SURROUNDING STRUCTURES

PALESTINE EXPLORATION FUND. PLATE 8.

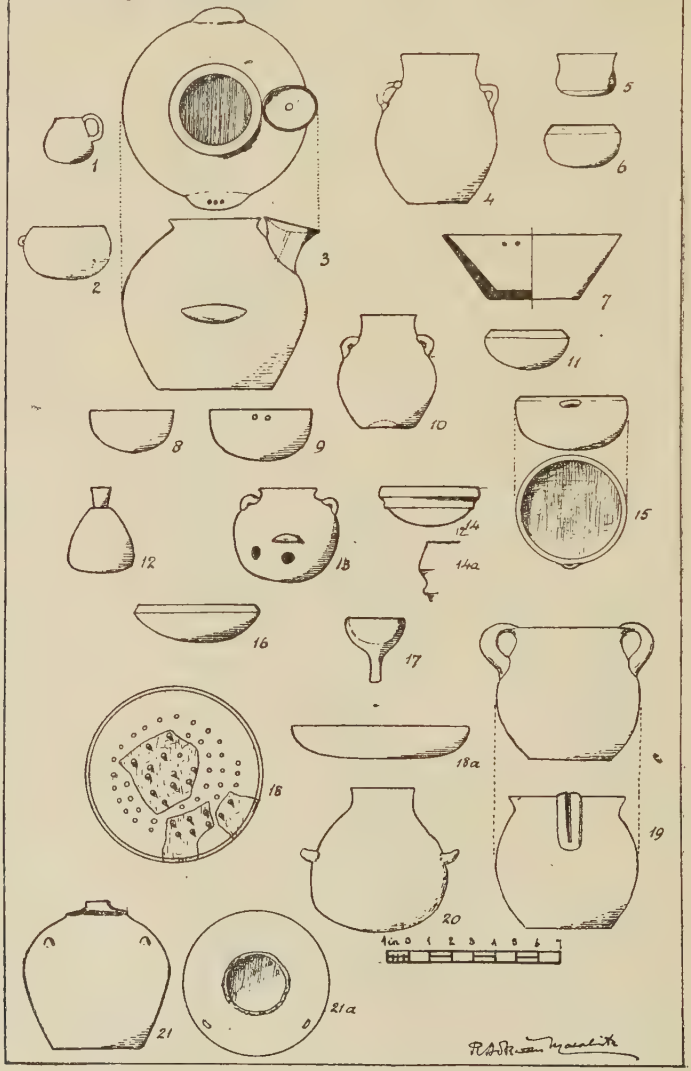
EXCAVATION OF CEZER

BURIAL CAVE: EARLIER POTTERY; STONE FIGURE



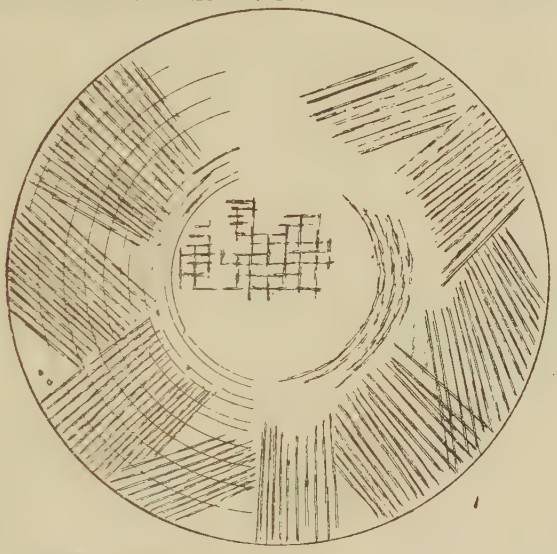
EXCAVATION OF CEZER

BURIAL CAVE : LATER POTTERY



EXCAVATION OF CEZER

BURIAL CAVE : COLOURED POTTERY



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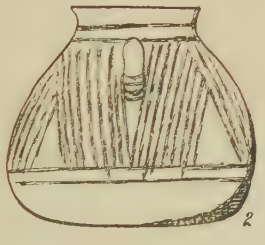

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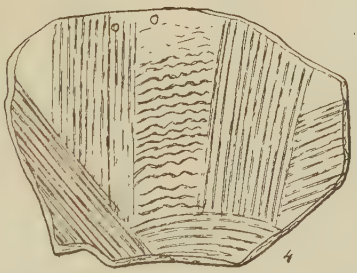

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3

GOLGOTHA AND THE HOLY SEPULCHRE

By Major-General Sir C. W. Wilson, K.C.B., F.R.S., R.E., &c.

(*Continued from p.* 293.)

The advocates of the view that the sites now shown as Golgotha and the Holy Sepulchre are authentic support their opinion by the following arguments :—

1. It is obvious from the Bible narrative that the positions of Golgotha and the Tomb were known to the friends and enemies of Jesus who were at Jerusalem at the time of the Crucifixion, and it is certain that many of those persons were alive when, ten years later, Herod Agrippa (A.D. 42–44) built the *third* or outer wall of defence on the north side of the city.

2. The construction of Agrippa's wall brought the two sites within the limits of the walled city, but, as the Jews regarded tombs[1] as unclean, no houses were built above them. Moreover, the existence of buildings in such close proximity to the *second* wall would have been prejudicial to its defence, and their erection would not have been permitted. The holy places thus remained bare and unoccupied, and could not have been forgotten before the city was besieged by Titus.

3. In obedience to the warning of Jesus (Matt. xxiv, 15, 16) the members of the Christian community fled from Jerusalem (*circ.* 67–68) before the siege commenced, and established themselves at Pella. When Titus, whose destruction of the city was not complete, left for Rome most of the Christians returned, and settled down amongst the ruins, after having been absent three or four years. The altitude of the holy places being slightly greater than that of the ground upon which the *second* wall stood, and their distance from the third wall being appreciable, they could not have been materially altered in appearance during the progress of the siege. Even supposing that they had been covered by one of the mounds of the besiegers, the sites would not have been lost. The Christians during their short absence could not have completely forgotten the

[1] Golgotha being the reputed tomb of Adam.

exact positions of places so intimately connected with the death, burial, and resurrection of Christ. Many of them, men and women, had passed their lives at Jerusalem; some had probably witnessed the Crucifixion; and one, at least, Simeon, son of Clopas, a cousin of the Lord's, suffered martyrdom in the reign of Trajan, *circ.* A.D. 108, at the reputed age of 120 years. Further, the unaltered nature of the ground after the siege is indicated by the circumstance that Hadrian, when he erected a Temple of Venus on the spot, *circ.* 135–136, carried out no demolition, and removed no rubbish, but was obliged to fill up hollows, and obtain a level platform by bringing the necessary material from a distance.

4. Nothing is known to have occurred during the interval that elapsed between the return from Pella and the suppression of the revolt of the Jews in the reign of Hadrian, which would justify the belief that all trace of the holy places had been obliterated, or that the Christians, whose numbers were steadily increasing, had forgotten their position. Simeon, son of Clopas, a contemporary of the death and resurrection of Jesus, who succeeded the Apostle James as Bishop of Jerusalem, lived to the first decade of the second century, and he was followed by 13 bishops of Hebrew origin, who would not have allowed a knowledge of the position of the holy places to die out.

5. The tradition with regard to the positions of Golgotha and the Tomb was thus continuous from the date of the Crucifixion to the time when Hadrian founded the Roman colony of Ælia on the ruins of Jerusalem, and a temple of Venus was built above the Sepulchre of Christ. By the erection of the temple,—an act of profanation which in itself shows that the two places were then honoured by Christians,—the holy places were completely concealed, but their position was definitely marked for all time, and they were preserved from injury.

6. After the foundation of Ælia the city was visited by pilgrims from all parts of the world, and it became a matter of common knowledge that the holy places lay beneath the paved platform upon which the temple of Venus stood. When, therefore, Constantine decided to recover the sites, and build churches in their honour, it was only necessary to demolish the temple and clear away the made ground beneath it. Eusebius, a contemporary, expresses no surprise at the recovery of the sites in his account of the circumstance: his remark (*Vit. Const.*, iii, 28) that "contrary

to all expectation" the "venerable and hallowed monument of Our Lord's resurrection" was rendered visible by the clearance of the superincumbent soil, is a natural expression of astonishment at the preservation of the Tomb during so many years, and has no reference to a miraculous discovery.

It will be observed that the above arguments involve the assumption that Golgotha and the Tomb were objects of reverence, or at least of interest to the Christians from the date of the Resurrection to the time of Constantine; that the tradition with regard to their position was continuous throughout that period; and that the ground now occupied by the Church of the Holy Sepulchre was outside the *second* wall. This assumption raises three questions, each of which requires separate discussion—the possibility, or otherwise, of a continuous tradition; the attitude of the early Christians towards the holy places; and the course of the second wall. The last question is in the main topographical and archæological, the first two are for the most part historical, and it is necessary to inquire what light is thrown upon them by the history of Jerusalem and its Church during the period A.D. 33–326, so far as it is known.

The Possibility or otherwise of a continuous tradition.

1. In A.D. 41 Herod Agrippa I was appointed by the Emperor Claudius king of the territory over which Herod the Great had reigned, and during his reign the *third* or outer wall of defence was commenced (Jos. *B.J.*, v, 4, § 2). Its course is not certainly known, but there can be no doubt that the traditional sites of Golgotha and the Tomb were enclosed by it. Those sites evidently formed part of an ancient Jewish cemetery, and there is every reason to believe that, in view of the state of Jewish feeling at that period, they were not utilised for building purposes.

On the death of Herod the government was resumed by Rome, and Cuspius Fadus was appointed procurator. He was followed by a succession of governors whose mal-administration and cruelty gave rise to the disorders and popular tumults [1] that culminated in the war with Rome and the destruction of Jerusalem. The

[1] The Christians must have suffered as much as the Jews from the brutality of the governors, but Christianity played no part in the disorders and tumults.

war broke out in A.D. 66, and, during its progress,[1] some time before the commencement of the siege of Jerusalem (April, 70), the Christians fled to Pella, a city of Decapolis with a mixed population in which the Greek element preponderated. Only 35 years had elapsed since the Crucifixion, and it seems certain that several of the refugees, and possible that every Christian of mature age, knew the positions of Golgotha and the Tomb.

2. Whilst the Christians were at Pella, Jerusalem was taken by Titus (August, 70), who is said to have ordered its complete destruction, with the exception of the three great towers connected with Herod's palace and a portion of the west wall (Jos., *B.J.*, vii, 1, § 1). How far this order was carried out is uncertain. Josephus writes as if all the walls and houses, with the exception mentioned, were razed to the ground (*B.J.* vi, 9, §§ 1, 4; vii, 1, § 1); but Eusebius is perhaps nearer the truth when he states[2] that only half the city was destroyed. Those portions of the city which lay north of the first wall, and those which lay on the eastern spur, Mount Moriah, and in the Tyropœon Valley, were the scene of much street fighting, and must have been practically destroyed during the progress of the siege. But the "Upper City," on the western spur, was not carried by assault. The Romans entered without striking a blow, and though the place was sacked and fired by the soldiers (*B.J.*, vi, 8, §§ 4, 5) many houses must have remained intact. The military requirements of the Roman garrison probably necessitated much demolition; but there is no evidence that a plough was passed over the ruins, or that Titus ever intended that the city should never be rebuilt.

After the capture of the capital, Judæa became an independent province, which was occupied by one legion, the celebrated Legio X Fretensis, and a body of "auxiliary troops of foreign origin drawn in part from the farthest lands of the west." The legion was quartered in the north-west corner of the "Upper City," and, until the reign of Hadrian, Jerusalem was neither a colony nor a *municipium*, but a Roman camp. During this period (A.D. 70–116) there was no attempt at reconstruction, and no large buildings were erected. The walls of the fortifications, of the palaces, and of

[1] Probably during the winter of 67–68, soon after the arrival in Jerusalem of John of Gischala (Nov., 67); *cf.* Matt. xxiv, 20, "Pray ye that your flight be not in the winter."

[2] *Dem. Ev.*, vi, 18.

the houses lay as they had been left by Titus. A few heaps of ruins may have been overgrown by rank vegetation; but there was nothing to prevent anyone who had known the city before the siege from recognising any particular spot or street within the walls. The physical features underwent no change; but here and there they may have been concealed by the *débris* of the city.

The camp[1] was protected on the north and west by Herod's towers and portions of the *first* wall; but of its limits on the south and east, and of its defences on those sides nothing is known. The garrison must have consisted, at first, of the whole or the greater part of the tenth legion, with a due proportion of auxiliaries, forming together a force of about 6,000 or 7,000 men. By the side of this force, but living apart from it in separate quarters, there must have been a large miscellaneous population, possibly amounting to 3,000 or 4,000, which consisted of the wives and families of married officers and men, camp followers, merchants, small traders, and others, who were attracted by the presence of a large permanent garrison. The total military and civil population a few years after the siege would thus be from 8,000 to 10,000. The quarter of the city inhabited by the latter is unknown, but it was probably that part of the "Upper City" which was not occupied by the legion—a broad space being left between the fortifications of the camp and the nearest houses. Here would be allowed to dwell those poverty-stricken Jews who had not been deported or sold by Titus, and those who had not compromised themselves by taking part in the war.[2] And here, too, amidst soldiers and civilians drawn from all parts of the known world, the Christians probably settled down on their return from Pella, making many converts and worshipping in a small building[3] which, in happier times, was to become the "Mother Church of Zion," the "mother of all the Churches." The

[1] The camp would be a *castra stativa*, round which, according to Roman custom, peaceful natives and Roman and foreign merchants would settle down outside the fortifications.

[2] After the complete suppression of the rebellion, the Jews were not unkindly treated, possibly owing to the fact that Judæa had become Imperial property and to the relations between Titus and Berenike. No attempt was made to interfere with the great Rabbinical school at Jamnia, and no edict was issued forbidding Jews to visit or reside in Jerusalem.

[3] According to Epiphanius (*De Mens. et Pond.*, xv), there was a church on Mount Zion in Hadrian's time, on the spot where the disciples partook of the Supper after the Ascension.

fact of the return from Pella is undoubted, the date is unknown. Dr. Robinson, following Münter,[1] places it after the suppression of the revolt in Hadrian's reign, and the foundation of Ælia (*B.R.* i, p. 371, edition of 1856). Renan considers it most probable that part of the Church returned after the complete pacification of Judæa (*circ.* A.D. 73), but that the date may possibly have been as late as A.D. 122, when, according to him, Hadrian decided to rebuild Jerusalem as Ælia (*Les Evangiles*, pp. 39, 56). The earlier date would seem the more probable and the more natural. There was nothing in the political condition of the country to prevent the return, and the Christians would hardly have neglected such a favourable field for missionary enterprise as that presented by the camp and its entourage. Assuming that a small Christian community, with Simeon as Bishop, settled down amidst the ruins of the city about A.D. 72–75, the absence would have been at most seven years —a period far too short to blot out all remembrance of the positions of Golgotha and the Tomb. Even supposing that the Jerusalem Church did not exist, as a body, until 122, it is impossible to believe that the city was never visited between A.D. 72 and 122 by individual Christians who were well acquainted with the holy places, and fully capable, had they so wished, of imparting their knowledge to others, and so perpetuating the tradition.[2] On the whole, it seems to be a fair conclusion that the circumstances connected with the siege and with the residence of the Christians at Pella were not such as would have rendered a continuous tradition with regard to Golgotha and the Tomb, either amongst the Jews or the Christians, impossible.

3. After the capture of Jerusalem, every Jew over 20 years of age who wished to retain his religion was compelled to pay to the temple of Jupiter Capitolinus at Rome the tax of two drachmae (half a shekel), which formerly had been paid to the Temple of the Lord. The annual collection of this tax, rendered intolerable by the coins, bearing the head of the emperor, with which it was paid, must have kept alive a deep feeling of resentment amongst the Jews. Some alleviation, possibly in the method of collection, was granted by Nerva, but the country seems to have remained in an unsettled

[1] In Robinson's *Bibliotheca Sacra*, 1843, p. 448.

[2] The quotation of Eusebius from Hegesippus (*H.E.*, ii, 23), that the "monument" (ἡ στήλη) of James "still remains by the Temple," implies a knowledge of Jerusalem after the siege by the Christians.

state throughout the reign of Trajan. Some minor outbreaks were suppressed, and order was completely restored in the first year of Hadrian, A.D. 117. The Jews subsequently remained quiet until 132, when they broke out in open revolt, under the leadership of Bar Koziba (Cozeba), or Bar Kokba (Cocheba).[1]

According to Dio Cassius (LXIX, 12), the cause of the rebellion was Hadrian's decision to rebuild Jerusalem as a heathen city, and to erect a temple of Jupiter Capitolinus on the site of the Jewish Temple. Spartianus, on the other hand (*in Hadr.*, c. 14), gives as the reason the issue of Hadrian's edict forbidding the practice of circumcision. Eusebius says (*H.E.* iv, 6) that the colony was established after the suppression of the insurrection. This statement may be reconciled with that of Dio Cassius by supposing that the founding of the colony was interrupted by the revolt, and completed after its suppression. Hadrian was a great builder and restorer of cities: he had seen the ruins of Jerusalem, and the restoration of the old capital of the Jews to its former magnificence may well have appealed to his imagination.

The insurgent Jews, animated by the belief that the Messiah had appeared in the person of Bar Koziba,[2] at first carried everything before them. Jerusalem was taken, and 50 fortified places and 955 open towns and villages are said to have fallen into their hands. Coins were struck,[3] and an attempt was made to rebuild the Temple.[4] Little is known of the incidents connected with the

[1] The name probably comes from the town of Chezib, or Chozeba. Bar Kokba, "son of a star," which appears in Christian writers, has reference to Balaam's prophecy in Num. xxiv, 17. For the Jewish traditions see *Jewish Encyclopædia*, Art. "Bar Kokba."

[2] The destruction of the Temple, and consequent cessation of the sacrifices, gave fresh strength to the Messianic hope of the Jews, whose aspirations, partly political, were of sufficient importance to attract the notice of the emperors.

[3] Madden (*The Coins of the Jews*), describes coins of Vespasian, Domitian, and Trajan, which are super-struck on the obverse with the name *Simon* and some device such as a wreath, a cluster of grapes, a tetrastyle temple, &c., and on the reverse with the legend, *the deliverance of Jerusalem*. There are also coins of Vespasian and Trajan which are super-struck with the legend, *second year of the deliverance of Israel*.

[4] The attempt to rebuild the Temple may be inferred from Chrysostom (*Orat. Adv. Judæos*, v. 10, Migne, Pat. Gr., xlviii, col. 899); *Chron. Pasch.*, 119 (Migne, xcii, col. 613); G. Cedrenus (*Hist. Comp.*, Migne, cxxi, col. 477); and Niceph. Callistus (*H.E.*, iii, 24, Migne, cxlv, col. 944). According to Jewish tradition, Hadrian granted the Jews permission to rebuild the Temple,

progress of the war,[1] and the capture and recapture of Jerusalem are nowhere described. Tineius Rufus,[2] the procurator, and Marcellus, the governor of Syria, who was sent to his assistance, were unable to quell the rising, and it was not until the arrival of Severus from Britain, in 135, that the war was brought to a close by the capture of Bether (*Bittîr*), after it had lasted three and a half years. The date of the recapture[3] of Jerusalem is uncertain, but the city would appear, from the coins, to have been in the hands of the Jews for more than a year. According to the Mishna (*Taanith* iv, 6), Jerusalem was levelled down with the plough; but according to Maimonides and Jerome the plough was only passed over the site of the Temple.[4]

The position of the Church at Jerusalem, and the attitude of the governors towards it and towards the Judæo-Christians, are obscure. When the Church re-formed round Simeon it had lost its pre-eminence. Christianity had passed beyond Judaism and entered a wider field; but those Christians who had carried with them to Pella an unabated reverence for the Law, apparently returned unchanged. Titus, at the time of the siege, seems to have regarded the Christians as a Jewish sect, and at first the governors, probably, saw little difference between the Judæo-Christian and the outcast Jew. Simeon and the bishops who succeeded him were of the circumcision,[5] and it was only gradually

but withdrew it, after work had been commenced, in consequence of the representations of the Samaritans (*Jewish Encyc., l.c.*).

[1] Jewish tradition relates that the Romans fought 52 battles, not always with success.

[2] Called Tinnius Rufus by Syncellus; Tynius Rufus (*Chron.*), Timus Rufus (*in Dan.* ix), and Titus Annius Rufus (*in Zach.* viii) by Jerome; and Turnus Rufus and Tyrannus Rufus by the Rabbis.

[3] The fact of the recapture of Jerusalem is stated by Appian (*De Reb. Syr.*, 1) and the Samaritan Book of Joshua. It may also be inferred from Eusebius (*Dem. Ev.*, vi, 18), Chrysostom (*Orat.* v, *Adv. Judæos*), Jerome (*in Hab.* ii, *in Ezek.* v, 1), the *Paschal Chronicle*, &c.

[4] Maim., as quoted by Münter; Jerome, *in Zach.* viii. If the plough had been passed over Jerusalem, Hadrian could not have rebuilt the city. The tradition may refer either to the ceremony of initiation when a new city was founded (*see* Schürer, *H.J.P.*, p. 308), or to the exauguration of the site of the Temple, as an intimation to the Jews that no emperor would ever permit their place of worship to be rebuilt.

[5] There seems no reason to doubt the succession of Judæo-Christian bishops as given by Eusebius (*H.E.* iv, 5), on the authority of writings (ἐξ ἐγγράφων).

that all attempt to conform to the Mosaic Law was abandoned. The alienation from Judaism became complete when Bar Koziba was openly received as the Messiah. The Christians, who were expecting the second coming of Christ, could take no part in a movement of which the Messianic character was so pronounced. They were consequently persecuted with peculiar violence by the insurgent Jews (Just. Mart., *Apol.* i, 31 : Eusebius, *H.E.* iv, 6). During the period A.D. 73–135 there appears to have been no formal law forbidding Christianity, and no express edict ordering its suppression. The only event that need be noticed is the martyrdom of Simeon, who was put to death because, as a relation of Christ, he was regarded as a descendant of David and one of the royal race.

It would appear from the above that nothing occurred prior to the rebellion which would render the transmission of a tradition, brought back from Pella, impossible ; and it cannot be supposed that every Christian, of Jewish or Gentile descent, who knew the positions of Golgotha and the Tomb, perished during the revolt.

N.B.—It has been pointed out to me that the statement on pp. 290, 291, that according to the Bible "Christ was crucified in a garden," is not strictly accurate. This is nowhere distinctly stated. John records (xix, 17) that the place (ὁ τόπος) where He was crucified was called Golgotha, and that in the place (ἐν τῷ τόπῳ) where He was crucified there was a garden, and in the garden a tomb. This may mean that the garden was a comparatively small enclosure[1] within the larger area of the τόπος called Golgotha. The view which I have taken is that the crosses were erected on one of the terraced gardens or orchards in the vicinity of the city, and that the garden was a part of the terrace close to the spot called Golgotha.

(*To be continued.*)

[1] An enclosed garden (κῆπος κεκλεισμένος) is mentioned in the Song of Solomon, iv, 12. The word Golgotha is used by some early writers to denote the actual spot on which the cross was erected, and a larger area round that spot, including the place where the crosses were found.

SUPPLEMENTARY REMARKS UPON THE GREEK INSCRIPTION FROM BEERSHEBA.

By Professor Clermont-Ganneau, M.I.[1]

Fresh investigations which I should have liked to pursue further, but which may be advantageously resumed by other scholars more familiar than myself with the labyrinth of Roman and Byzantine law, have led to my meeting with a document which appears to me to cast some light upon the inscription of Beersheba. It is an imperial constitution or ordinance, dated at Constantinople, March 23rd, 409, and addressed to Anthemius, the prefect of the prætorium,[2] by Theodosius II. In view of the peculiar interest it has for us I think it advisable to reproduce it *in extenso* after Godefroy :—[3]

Pretia per Palæstinas tres antea pro annonis statuta servari jubentur.
XXX idem[4] A. A. Anthemio PP.[5]

Limitanei milites[6] et possessorum utilitate conspecta, per primam, secundam, ac tertiam Palæstinam huiuscemodi norma processit, ut prætiorum certa taxatione depensa, specierum intermittatur exactio : Sed Ducianum Officium sub Versamini et Mœnæni Castri nomine, salutaria statuta conatur evertere. Ideoque lege repetita censemus, ut si quis interclusam specierum exactionem refricare temptaverit, vel adærationes statutas ausus fuerit inmutare, tam vir Spectabilis Dux centum librarum auri, quam etiam eius Officium pari condemnationis summa quatiatur, adjecta sacrilegii poena, quæ Divalium scitorum[7] violatores palam insequitur. Dat. X kal. April. Constantinop. Honorio A. VIII et Theodosio III. AA. conss.

As one sees, it deals with the removal of certain difficulties which had arisen between the inhabitants and the frontier-garrisons, by the

[1] Translated from the author's *Recueil d'Archéologie Orientale*, tome V, § 27, pp. 143 *et. seq.* See *Quarterly Statement*, July, pp. 269–282.

[2] The same person probably who had been Consul of the Orient in 405.

[3] Godefroy, *Codex Theodosianus*, tome II, p. 327 = ed. Ritter (Leipsic), tome II, p. 324.

[4] Honorius and Theodosius II.

[5] Prefect of the prætorium, *ἐπάρχῳ πραιτωρίων*.

[6] *Militis* ? or *militum* (*limitaneorum*) ?

[7] = *Θεῖοι τύποι*.

application of a rule, substituting, in their mutual interest, in the three provinces of Palestine, for the payment in kind of rents due to the troops (*annonæ*), payment in cash at an officially fixed rate (*adæratione*s). The case cited is particularly interesting to us. It appears that the officials of the *dux* acting at the camps of Versaminum and Mœnænum had refused to conform to the new rules. The emperor confirms the legislative provisions previously enacted, and forbids whomsoever it may concern to revert to the former method of collecting in kind, or to modify the taxes substituted, under a penalty for the *dux*, as well as for his officials, of a fine of a hundred pounds of gold, in addition to the punishment to which every sacrilegious violation of an imperial order is liable.

This official document, then, relates precisely to that question of the *annonæ* and *adæratione*s to which I was brought, by general considerations of an entirely different nature, to connect our inscription. The agreement becomes singularly topical when one takes count of the two places in Palestine cited by the Imperial order: the camps of *Versaminum* and of *Mœnænum*. As one has long recognised, these places are no other than Beersheba and Menoïs. Now Beersheba is the very place whence the inscription came. The form *Versamini* is for *Versabini*, *Bersabini*. For the alteration which the transcription has undergone, *cf.* the reading Βιροσάμων of one of the manuscripts (D) of George of Cyprus,[1] and also the readings of the manuscripts of Ptolemy[2]: Βέρζαμα, Βέρζαμμα.[3] The name Menoïs has suffered less. The close association of the two places is sufficient to guarantee the identity of the former. In the *Notitia Dign. Imp. Rom.*, the places *Berosabæ* and *Menoidæ* are mentioned side by side as occupied by detachments of Illyrian cavalry. The mosaic map of Medeba marks not far from one another on a line from west to east: Μηνοΐς (Μαϵεβινὰ ἡ νῦν),[4] and (not far from Gerar): Βηρσαβϵέ ἡ νῦν Βηροσσαβά. They are to be found upon the

[1] Ed. Gelzer, p. 53.

[2] Ed. C. Müller, p. 492.

[3] Not to mention also the wholly distorted form Μεζαρμαι.

[4] According to the statements of the *Onomasticon*, *s.v.* Μηδεβηνά. The situation of Menoïs has not yet been exactly determined. It is generally identified with *Minyây*, which Robinson marks upon his map to the south of Gaza (perhaps *El-Menîyeh*, on the map of Van de Velde?), but seems to have known only by hearsay. (Robinson, *Biblical Researches*, vol. I, p. 563, last station of an itinerary from Sinai to Gaza.)

southern frontier of Judæa and belong to *Palæstina Tertia*, that is to say, as St. Jerome tells us,[1] to *Palæstina Salutaris*, in consequence of a somewhat recent organisation. Elsewhere,[2] he adds with Eusebius, that Beersheba was the residence of a Roman garrison (*φρούριον*, *præsidium*).

One cannot avoid being struck with the convergence of all these facts. If the palæography is not an obstacle, one might, perhaps, without being too rash, take the inscription of Beersheba to be a reproduction of the actual text of the Imperial edict regulating the *adæratio* of the *annonæ* for the three provinces of Palestine. Since local difficulties had arisen on this occasion at Beersheba, it would evidently be to the interest of the municipal authority of the town to publish under this official form the law which safeguarded the people against the abuses of the military power. These abuses, further, could have recurred at various times, so that the date of our inscription is not necessarily that of the ordinance of 409, although it is very tempting to associate the inscription with the conflict which arose at Beersheba, and to which the ordinance expressly refers. Who knows if, some day, there shall not be discovered at Menoïs, which suffered at the same time from the same abuse of power, a fresh and better preserved copy of our inscription, written for the same purpose ?

It is possible that the lost preamble of the inscription explained the circumstances which led to the engraving of it, and said that, to cut short all strife, it reproduced the law which laid down the new state of affairs for the three divisions of Palestine, the particular case of Beersheba being found thus defined in its proper place with much more authority. The fragment would then belong to this general law which seems to be referred to by the ordinance of 409 (*lege repetita censemus*), and which, unfortunately, has not been preserved in the collection of Imperial acts. This law is referred to still more precisely in another enactment of Theodosius II, some months (November 30th, 409) after the preceding. In order to make this important point clear it seems worth while to quote it[3] :—

[1] *Quaest. ad Genes*, xvii, 30 : " ubi et Bersabee usque hodie oppidum est ; quæ provincia ante grande non tempus ex divisione præsidum Palæstinæ Salutaris est."

[2] *Onomasticon*, *s.v.* Βηρσαβεέ.

[3] *Cod. Theodos.* ed. Ritter, tome II, p. 325.

XXXI, idem, A. A. ad Anthemium PP.

Militaribus commodis prospicientes, aedaratarum annonarum, quae Familiis, apud Orientem vel Aegyptum præberi consuerunt, certa ac distincta locis et numero pretia statuimus. Verum quia in hoc et provincialium nobis habenda est cura præcipua, ne nimia festinatione poscendi conlatorum vires adteri videantur, certum constitui tempus placet, quo eadem pretia debeant præberi poscentibus. Quapropter, uniuscuiusque indictionis annonariam in pretiis rationem, transacta ea, sequentis indictionis mense Novembri completo præberi precipimus. Dat. Prid. Kal. Decemb. Constantinop. Honorio VIII et Theodosio III, AA. Conss.

By this additional order the emperor allows a certain amount of delay, in order to facilitate to the tax-payers of the provinces of the Orient and of Egypt the payment of the *adæratio*, representing the old taxes in kind due to the soldiers and to their families. The sum total of this contribution, extending from the commencement of the indictional year (September) is to be exacted only at the close of the November of the following indictional year, that is, a period of 15 months. Above all, the expression, *certa ac distincta locis et numero pretia statuimus*, is remarkable. There was, therefore, a rule which fixed the various proportions according to the places and according to the number of the troops residing there. It must be admitted that this has a close resemblance to that which I believed I recognised in our fragmentary inscription, where the names of places alternate with the mention of various officials, and are inscribed opposite a series of totals more or less high.

JULIAN'S ATTEMPT TO RESTORE THE TEMPLE, AND OTHER NOTES.

By the Rev. J. E. Hanauer.

I.—For several years past I have often thought and puzzled over the story of the Emperor Julian's abortive attempt to restore the Jewish Temple and Temple-worship. The narrative rests on the authority of various ecclesiastical and other writers. Milman's version (*History of the Jews*, vol. iii, p. 18, *seq.*) is, briefly, as follows :—

"The Emperor's edict set the whole Jewish world in commotion. The execution of his project was entrusted to his favourite Alpius. The wealth of the Jews was poured forth in lavish profusion, timber, stones, lime, burnt brick, and clay were heaped together in abundant quantities (Socrates *H.E.* iii, 20). Already was the work commenced; already had they dug down to a considerable depth, and were preparing to lay the foundations, when suddenly flames of fire came bursting from the centre of the hill, accompanied with terrific explosions. The affrighted workmen fled on all sides, and the labours were suspended at once by this unforeseen and awful sign. An earthquake shook the hill, flakes of fire settled on the garments of the workmen and the spectators, and the fire consumed even the tools of iron." (Socrates *H.E.* iii, 20; Theodoret iii, 20; Sozomen v, 22; Gregory Nazianzen, *in Judæos* iv.) On the following page, and in a footnote, Milman has the following quotation from the pagan historian, Ammianus Marcellinus :—"Cum itaque rei idem fortiter instaret Alpius, juvaretque provinciæ rector, metuendi globi flammarum prope fundamenta crebris adsultibus erumpentes fecere locum, exustis aliquoties operantibus, in accessum; hocque modo elemento destinatius repellente, cessunt inceptum."

After making all allowances for exaggerations, we cannot escape the conviction that some such occurrence as that described really did take place, and the mind at once enquires as to its natural causes. Gunpowder and other modern explosives were then unknown, how are we to account for the event? Milman suggests the accumulation of foul and inflammable vapours in the vaults and caverns of the Temple Hill. His suggestion is a very reasonable

one, and yet, to my mind, not altogether satisfactory. Why is it that during the extensive excavations carried on during the last half century everywhere in Jerusalem, and in the course of which many ancient vaults and cisterns were re-discovered, none have been found containing inflammable and explosive vapour? I have heard of several that, when opened, contained air so foul that men who went down to explore them became dizzy, ill, and even unconscious, but in these lanterns and candles, when lighted, *would not burn*, the vapours not being inflammable. Nor have I heard of explosive vapours or "fire damp" occurring anywhere else in Palestine. The *débris* accumulated on the Temple Hill is of the same character as that in other parts of the city—why then have there been no accumulations of explosive gases in other parts of the town?

I would therefore, with all diffidence, and solely from a desire to elicit information, take the liberty of making another suggestion. It may at first sight seem absurd and preposterous, but it has at least one very ancient tradition, going back to pre-Christian times, in its favour. It is this: The workmen did, indeed, tap some subterranean place; it contained inflammable vapours, which accidentally took fire. Was it, perhaps, an ancient cistern containing bitumen, naphtha, or petroleum? The ancient tradition in support of my suggestion to which I have referred is the well-known passage from 2 Macc. i, 19–23, A.V.:—

"When our fathers were led into Persia, the priests that were then devout took the fire of the altar privily, and hid it in a hollow place of a pit without water, where they kept it sure, so that the place was unknown to all men. Now after many years, when it pleased God, Neemias, being sent from the King of Persia, did send of the posterity of those priests that had hid it, to the fire; but when they told us, they found no fire, but thick water. Then commanded he them to draw it up and to bring it; and when the sacrifices were laid on, Neemias commanded the priests to sprinkle the wood and the things laid thereupon with the water. When this was done, and the time came that the sun shone, which afore was hid in the cloud, there was a great fire kindled, so that every man marvelled."

It seems clear from the description of this "thick water," which, as we read in verse 36, Nehemiah called "nephthar," that it must

have been something very similar to the naphtha of modern commerce. "The word water is here merely used for 'liquid,' as in *aqua vitæ*. Native naphtha is sometimes obtained without colour, and in appearance not unlike water. Various conjectures have been advanced in explanation of the name 'naphthar,' which is being interpreted 'cleansing,' and which has puzzled all the interpreters" (*see* article "Naphthar," and footnote, in Smith's *Bible Dictionary*). As a matter of fact, petroleum or naphtha, which in modern times was introduced into Palestine in or about 1865, is nowadays largely used by the lower class natives, not only for lamps, *but also for cleansing*, not only the woodwork, of lime and objectionable insects, but also dirty human heads, &c.

Supposing the story of the "naphthar" to be true, it would follow:—

(1) That the knowledge of the cistern containing it had been confined to certain of the priests, and that the reservoir had been hermetically closed for 70 years, and so securely that its contents were, at the lapse of that period, still in a liquid state.

(2) That though the spot had, subsequently to Nehemiah's purification, been "enclosed" and "made holy" (2 Macc. i, 34, A.V.), yet in the later political troubles the knowledge of its position was lost,[1] for we read that when the victorious Hasmonæans recovered the temple they obtained fire for their new altar by "striking stones" (2 Macc. x, 3).

The means used for making the reservoir vapour proof may have been stone-hard cement like that found by Sir Charles Warren in the Birket Israel, and by Mr. Maudslay in the Bishop Gobat's School.

I would, in conclusion, remark that I have found that there exists a tradition amongst the native Christians of Jerusalem, to the effect that a great many years ago there was discovered in the Armenian Convent of Mâr Yakûb (St. James), at Jerusalem, an ancient cistern full, not of naphtha, but of oil so old that it had coagulated and thickened. It is said to be most efficacious in the treatment of wounds and bruises. When about thirteen months ago my right hand was badly maimed by the bite of a donkey, some Armenian women of our acquaintance told my wife this tale,

[1] Or does verse 31 mean that Nehemiah ordered the whole supply to be used up and none left?

and urged her to try this ancient oil, or ointment, which they offered to furnish, for my cure. This story I have verified by personal enquiry at the Armenian Convent. The find of oil is said to have happened about 80 years ago. There is no one now living who remembers the event.

II.—In the *Quarterly Statement* for January, 1902, p. 102, it is remarked that when Zuallardo was here and visited "Pilate's house," in the modern barracks north-west of the Ḥaram Area, it was believed that the groans of Jews awaiting the Day of Judgment could be heard there. This tradition is now located in two places in the Church of the Sepulchre:—

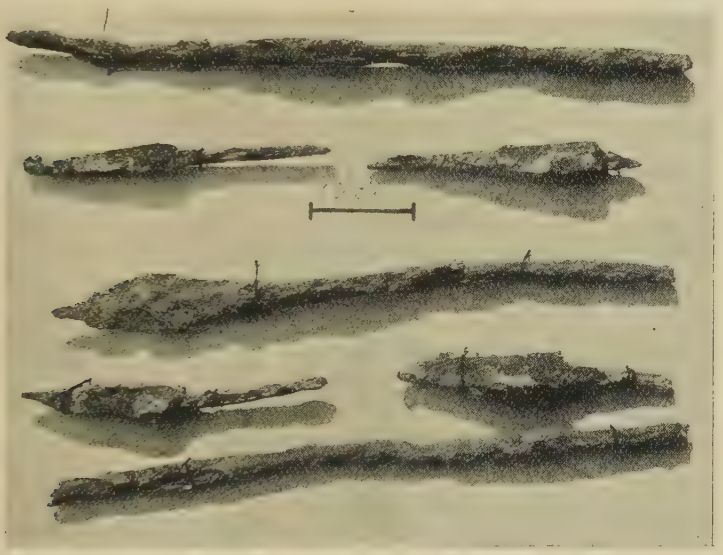
(1) An old Greek priest has told me that in ancient times there was a hole in the middle of the floor of the Kenîset Nusf ed-Dunya, and that the present low pillar, marking "the centre of the earth," was placed there in order to prevent the wailings of the lost from disturbing the worshippers.

(2) On the northern wall of the Chapel of Helena is shown the spot where, it is said, there was once a window, now closed for the same reason.

III.—A few months ago I had the pleasure of conducting the well-known Church Missionary Society's veteran medical missionary, Dr. Henry Martyn Clarke, of Amritsar, over the Ḥaram Area. I showed him the cuttings described on pp. 206–7 of the *Quarterly Statement* for 1891. The earth in the circular basin had been recently quite cleared out. Dr. Clarke told me that he has often seen exactly the same thing in India in many places. The basin was, he said, intended to receive a rolling millstone (like those used in Palestine for crushing olives), but in this case to crush lime, &c., and that the curiously polished cup-hollows and gashes in the rock had been formed by the sharpening and polishing of workmen's tools, &c.

IV.—I enclose herewith a photo, which Mr. Macalister was so kind as to take for me, of some arrow-heads to which I have previously referred. They were dug up about 12 years ago, when the excavations for the enclosure wall of the L.J.S. Mission property at Safed were being made. There is, however, no record of the depth

at which these wrought-iron arrow-heads were found. The mission property is situated just outside the moat which surrounded the old, and now utterly ruined, castle. It lies at its W.N.W. corner. The



small photo is an attempt made by myself with a small instrument of my eldest boy's.

THE NECROPOLIS OF MARESHAH.

Preliminary Notice.

In his report on the excavations at Tell Sandaḥannah (*Quarterly Statement*, 1900, p. 336), Dr. Bliss proposes to identify the city situated there with the Mareshah of the Old Testament, the home of the prophet Micah, the Marisa, Maresa, or Mareisa of LXX, of 1 and 2 Maccabees, and of Josephus, an identification already in part proposed by Dr. George Adam Smith (*Historical Geography of the Holy Land*, p. 233).[1] An inscription found by us in a tomb in

[1] [*See* the forthcoming memoir, *Excavations in Palestine during the years* 1898–1900, pp. 67–70.]

the necropolis of that site seems to give the desired monumental confirmation of Dr. Bliss's conjecture. We had heard in Jerusalem that there was a great deal of illicit excavating for antiquities in the neighbourhood of Beit Jibrîn, and especially that some notable "finds" had been made recently in a grave at that place, for which dealers had paid £50 on the spot. Visiting that region for the purpose of seeing the sites excavated by the Fund at Tell Sandaḥannah, Tell Judeideh, &c., we inquired somewhat about recent diggings and discoveries. We were finally conducted to two remarkable tombs, recently unearthed in the hill marked Kh. el-Kûka on the large survey map of the Fund, on the eastern edge of Wâdy el-Bîâd, one on the north and the other on the south side of a small wâdy or depression setting back into the hill east of Tell Sandaḥannah, the next north from Wâdy Beit 'Alam. These tombs are of the same general form described by Prof. Clermont-Ganneau in his *Archæological Researches* (II, 445), under the title "Remarkable Tomb," as found by him in the same necropolis, about a quarter of a mile or so further north. The entrance to them was by a door in the face of the rock, scarped to give a perpendicular front. (The present entrance is through a little hole in the ground by which you may creep down and through the upper part of the old door.) Passing through this first door one is in an antechamber, with long extensions to the right and left, having *kôkîm* (receptacles for the sarcophagi or bodies to be placed at full length) on both sides and at the ends, and a bench in front of the *kôkîm*. These, and all the other *kôkîm* in these tombs, had sharp, gabled roofs, "triangular in section," as M. Ganneau describes them. It will be observed that these two chambers of *kôkîm* in our tombs correspond in position to the single *kôkîm* to the right and left of the entrance in the much smaller tomb described by M. Ganneau.

Passing through the fore-chamber above described, one enters through a second door the large main chamber, which was, in both of these tombs, highly decorated with frescoes, painted in the more northern tomb on the rock, in the other on plaster laid on the rock. Along the sides of this chamber are gable-topped *kôkîm*, with a bench in front. At the rear or eastern end of the main chamber (both tombs are oriented, with the doors to the west, being on the east side of the valley) projecting pillars divide off as it were a daïs, from which open on the sides and end larger *kôkîm* and small rooms, the main burial-chamber being entered through a

decorated doorway in the centre of the rear wall. In the more northerly tomb there is also a large broad diwan or κλίνη before the main burial-chamber. It is the more northerly of these tombs which contains the greater number of paintings and inscriptions. Of the latter there are over 30 in all, written in Greek, most of them containing merely the names of the occupants of the various *kôkim*. Others contain information as to the age, position, or genealogy of the occupant, while one four-lined inscription on the side-post of the door of the main chamber is metrical. Some of the inscriptions are cut, some scratched, some painted, and some smeared on. They represent five generations of occupancy in the direct line, besides other occupants, perhaps of a different family and time. They show that the town to which the persons buried in this tomb belonged was called Mariseh (Μαρισῃ); they also show that there was a Sidonian colony at Marisa, just as there was, for example, at Athens about the same period, for, indeed, the "ruler of the Sidonians in Mariseh" was buried in this tomb Several of the names are Edomite. It will be remembered that this region was Idumæa, and that Marisa was the chief city of this Idumæa in the times of the Maccabees. Another set of names, compounded with Apollo, suggests, possibly, the influence of Gaza, the metropolis and capital of the province. We find also Egyptian names of the Ptolemaic time, and a large frieze around the walls of the main chamber represents in colours, which appear to be as fresh to-day as on the day they were painted, such animals, among many others, as the elephant, the crocodile, the hippopotamus, the rhinoceros, and the giraffe. Above each animal is written his name. A further evidence of Egyptian influence was a statue, cut out of the rock on one side of the entrance to the main chamber, having a Hermes-like lower part, on which was a head with Egyptian head-dress and crown, unfortunately broken when the tomb was rifled. On the other side of this entrance stood a square altar, also cut out of the rock, while a second, round altar stood in the main chamber. (On the walls of both tombs were painted also lamps and altars.) On both sides of the entrance to the main chamber were painted cocks, and on the side of the door-post a three-headed Kerberos. We found in this tomb three Rhodian stamped jar-handles, with the inscriptions respectively: επι Αρσιπονος Καρνειου (a Helios in the centre), επι Αρατοφανευς Σμινθιου, and επι Νικασαγορα Παναμου (a rose in the centre), which are interesting as bearing the same

names as jars found in the city opposite (*cf.* 2, 29, and 171 in Macalister's list, *Quarterly Statement*, 1901, pp. 28 *ff.*, 124 *ff.*).

We have here, in fact, a Ptolemaic tomb such as are found in Egypt, with certain local peculiarities. This is, of course, precisely what we should expect in the necropolis of Marisa in the third century B.C., for from *circa* 274 to 198 B.C. this region was in the hands of the Ptolemies.

The more southerly of our two tombs was less interesting in the matter of inscriptions, and there were fewer paintings, but the conception and execution of the latter were more artistic than in the northern tomb, and the colours more numerous.

Both of these tombs were found intact by the natives who rifled them, and some of the frescoes were injured through the stupidity or vandalism of those same natives; nevertheless, on the whole, their state of preservation may be pronounced to be remarkable.

A little further north, near the summit of the same hill in which the more northern of these tombs lies, we noted another tomb of the same type. This had been cut through and deepened to form a cave-dwelling, probably in the third or fourth century A.D.; but the general plan of the chambers, with the gable-topped *kôkîm*, was plain, and on the rear wall were fragments of two inscriptions like the latest of those in the tombs above described.

Still a little further north, just south of the ruins of the Church of Saint Anna, which has given its name to all this region, including the Tell opposite, on the north side of a little wâdy which runs in at that point, across a lime pit, there is a small creep opening, which leads into a Christian tomb, marked as such by the equal-armed, broad-ended crosses, with and without enclosing circles, painted in red on the walls. This tomb had a form somewhat similar to those described above, but was much smaller, and the *kôkîm* were square-topped, not gabled. From the further end of one of these *kôkîm* a small hole, probably broken in early times, leads into another tomb of the Ptolemaic period, of the same type as those described above, but much smaller. Names were cut or painted above the *kôkîm*, and owls were painted on the rear wall, but the work was poor.

For the space of about two miles from Beit Jibrîn to the junction of the Wâdy el-Bîâd and the Wâdy el-'Arab, south of Tell Sandaḥannah, the entire edge of the eastern hills has been dug up by the natives searching for graves, not to speak of diggings

elsewhere. An examination of the graves excavated, which are very various in form, and of as much of the pottery discovered as we could obtain sight of, shows that on the eastern side of the Wâdy Bîâd, across the valley from Marisa, lay a necropolis whose earliest burials (at least this is true of the earliest pottery brought from there) antedate the Jewish period. This whole necropolis should be thoroughly explored and excavated, as should also, in our judgment, the underlying strata of Tell Sandaḥannah itself. In the meantime, every effort should be made to prevent further illicit excavations in that region, and to preserve from vandals and curiosity-collectors the notable tombs above described, the only ones of the sort yet found in Palestine. The only use of painting worthy of the name discovered before this in a Palestinian tomb (it occurs in Phœnician tombs in the Græco-Roman period), to the best of our knowledge, is that described in Bliss and Dickie's *Excavations at Jerusalem*, pp. 243 *ff.* The walls of the so-called Mariamne tomb (*Quarterly Statement*, 1892, p. 120) were apparently prepared to receive a fresco, but the same causes which arrested this work while one chamber was still in process of excavation, probably prevented the painting of the frescoes on the walls.

It is a great pity that individuals and museums, by purchasing from antiquity vandals, encourage such a wholesale destruction of the priceless monuments of the past as has taken place in the neighbourhood of Beit Jibrîn and Tell Sandaḥannah.

We desire to thank Dr. Selah Merrill, United States Consul at Jerusalem, whose escort and advice greatly facilitated our work in photographing and securing accurate plans of these tombs.

JOHN P. PETERS.
H. THIERSCH.

JERUSALEM, *July 7th*, 1902.

A ROCK-CUT PRESS NEAR JERUSALEM.

By R. A. S. Macalister, M.A., F.S.A.

In the garden known as "Abraham's Vineyard," on the north-west side of Jerusalem, is a rock-cut press for the extraction of wine or olive oil, which is of sufficient interest and extent to merit special notice. It is probably the finest work of its kind in the neighbourhood of the city.

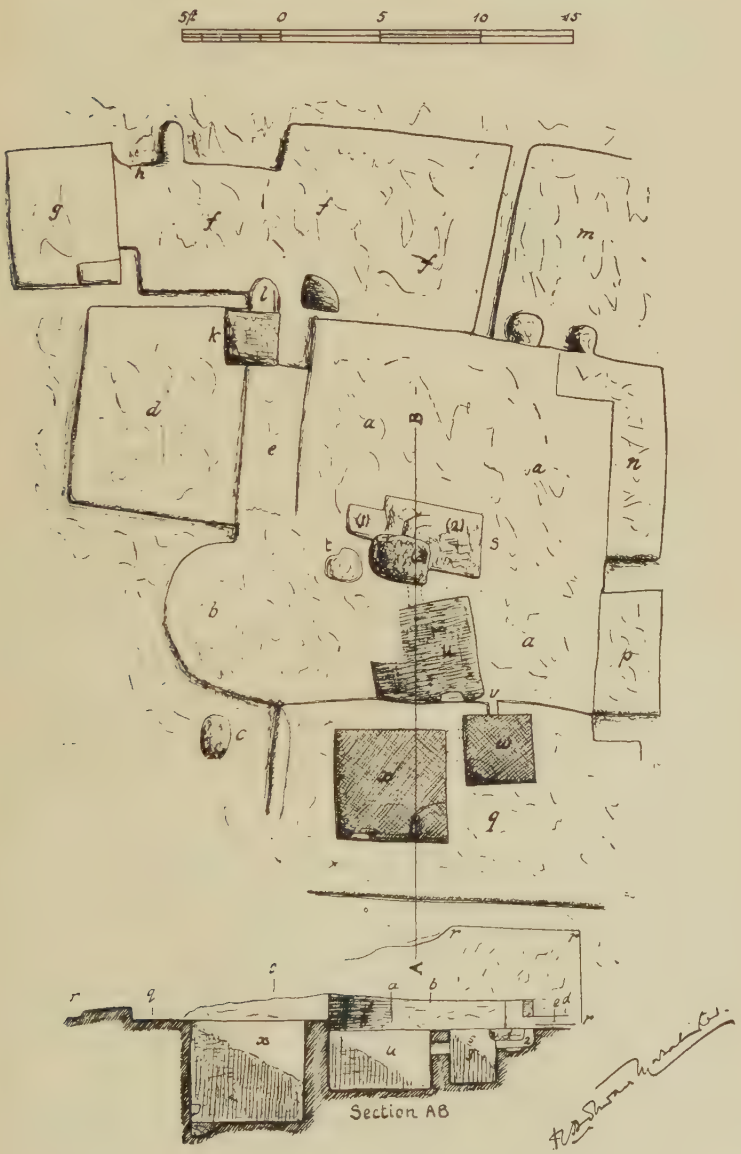
Essentially it consists of an artificially levelled rock-surface, divided into compartments by steps and by raised partitions, and containing several vats, large and small, for receiving and for refining the liquid

Abraham's Vineyard (Winepress).

pressed from the fruit. The following detailed description, aided by the accompanying plan and section, will convey a knowledge of its characteristics to the reader.

In the centre is a four-sided plane surface (*aa*), measuring about 20 feet by 16 feet, and containing within its area three vats, which will presently be described. In the east corner of this plane, on the south side, is a kind of apse (*b*) irregularly laid out, 9 feet in length, 6 feet in breadth. To the east of this apse the uncut rock rises to a height of 1 foot 6 inches above the general level of the floor. In this uncut portion is a small and irregularly formed vat (*c*) 11 inches deep, 2 feet

ROCK-CUT PRESS NEAR JERUSALEM



long, 1 foot 6 inches across. This vat has no apparent connexion with the press under discussion; and in all probability it is the surviving member of a cup-mark system destroyed when the press was cut. The uncut top of the rock falls in level toward the south.

Proceeding towards the west we find next to the apse a platform (*d*), four-sided, and raised 6 inches above the level of the central surface—or, rather, above the level of a step (*e*) which intervenes between the platform and the central surface. This step is 2 feet 8 inches across, and commencing from zero close to the eastern limit of the platform rises to a height of a little over 1 inch at its western end. The platform is separated from the apse by a partition of uncut rock 1 foot across, 11 inches high on the side of the platform. The platform is 10 feet 10 inches long (north-west to south-east), and apparently about 10 feet wide; the latter dimension is uncertain, as the south-west end is covered with earth.

Nearly the whole of the present western end of the system is occupied by a long and irregular platform (*ff*), about 4 inches above the level of that marked *d*, and 1 foot above the central space. I say the *present* northern end, as my friend, Mr. W. H. Dunn (to whose kindness I am indebted for assistance in examining this press, which is in the grounds under his management), assures me that it formerly extended further in the northern direction, the place of the extension being now occupied by a modern cistern. The maximum length of this platform is nearly 20 feet. At its southern end is a sunk space (*g*), 8 feet 4 inches across, and about 3 inches below the level of *ff*. The partition between *ff* and *g*, except for 1 foot 11 inches at the eastern end of the line between them, is broken away. In the east corner is a small oblong vat 2 feet across. At the point *h* the uncut surface of rock bounding the press rises to a height of 1 foot 10 inches: this is the maximum height of the rock-wall round the cutting. Close to *h* is a curious niche in the rock, 1 foot 10 inches long, 1 foot 1 inch across, and of the same depth as the surface, *ff*, itself. This may possibly be a socket for the reception of the end of the wooden beam with which the fruit was pressed.

Drainage from *ff* fell into a vat, *k*, 2 feet 11 inches long, 2 feet 7 inches across, 1 foot 5 inches deep. Liquid was conducted to this vat by means of a sunk channel, *l*. There is also a small vat, 1 foot 1 inch deep, in the surface *ff*.

Beside *ff* is another platform, *m*, separated from the former by a pier of rock 1 foot 2 inches high on the *f* side, 8 inches high on the *m* side. This platform was covered with a great pile of firewood when I examined the press, but as Mr. Dunn informed me that its surface displayed no details of interest, I did not think it worth while having it cleared. Two niches (similar to that near *h*) will be seen in the vertical face between *m* and the central surface (*n*).

On the north side of the central surface is a low step, 2 feet 2 inches broad at the northern, 4 feet 2 inches broad at the southern end,

and returned for 3 feet along the west side. This step is divided into two compartments (*n*, *p*) by a pier of rock.[1]

To the east of the central space is another space (*q*), containing two large vats ; this is bounded on the eastern side by a block of uncut rock, 9 inches high. The east side of this rock has been quarried, the scarp being marked *rrr* on the plan. This is possibly the remaining fragment of a further extension southward of the system.

The most feasible explanation of the purpose of these various compartments and platforms seems to be this. The press served for a vine- or olive-yard (most probably the latter), belonging to several proprietors ; each proprietor collected his own olives in the compartment devoted to his own use, to await his turn for pressing them. This prevented the fruit belonging to different owners from becoming mixed together, and secured each man's share to himself. Possibly the proprietor of the platform *ff* preferred to crush a few olives for immediate use while his colleagues were engaged with the large central vats : this might be put forward as an explanation of the small independent vat-system associated with that compartment.

The central system of vats remains to be described. The most westerly of these, *s*, is a triple vat, consisting of three basins (1, 2, 3), respectively 8 inches, 1 foot ½ inch, and 3 feet deep, inter-penetrating. In the floor of (2) is a drain conducting liquid to (3). The vat (*u*) to the south-east of this is 3 feet 3½ inches deep. It is connected with *s* by a channel (shown in the section) 10 inches below the level of the surface of rock *aa*. In the south-east corner of *u* is a rectangular depression, 2 feet 7 inches by 1 foot 6 inches. Close to *s* is a roughly formed and apparently unfinished vat, 11 inches deep : possibly the commencement of a receptacle afterwards, for some reason, placed at *u*. It is not quite clear how the vats were used, though it is obvious that the basin marked (3) was intended as a refining vat, the liquid being allowed to stand in it till the sediment had deposited, and then transferred to *u*. The channel between (3) and *u* is no doubt an overflow channel. I am inclined to think that three stages of refinement are in some way indicated by the three levels of the composite vat *s*, but I cannot say that I feel sure of this.

The surface *q* is about 6 inches above the level of *a* ; the step between them is interrupted at one point, *v*, where a little channel is cut to drain into the vat *w*. (This is one of the most puzzling details in the whole system.) It is not quite evident what relation, if any, existed between the two systems of vats, *s*, *u* on the one hand, and *w*, *x* on the other. It seems fairly clear that fruit was crushed on the floors, *a*, *q*, and that the juice was collected and refined in *s*, *w*, and stored for use in *u*, *x* ; but it is not obvious why the independence of the two systems is not preserved,

[1] The mound shown in the photographs (just under the letter *n* in the view from the south-east) is modern—a pile of waste lime left after recent building operations.

and the juice from a is allowed to run into a vat belonging to q. One possible explanation might be advanced, namely, that w, x were originally the only vats in the system, and that aa formed the crushing ground. All the fruit was crushed on this surface, and the juice conducted through the channel v to the vats for subsequent refining processes; and that for some reason—to prevent delay, possibly—it was afterwards thought advisable to form two more vats (s, u) in this surface, and to form another crushing ground round w, x. The process could then be carried on in two independent systems at once, and thus would occupy but half the time. Though not a conclusive proof of this suggestion, I may advance in its favour the fact that the vats w, x differ in three remarkable details from the otherwise similar vat v. (1) Their floors are covered with a tesselated pavement. (2) They are much more carefully laid out; they are almost perfectly square on plan, and contrast to a marked degree in this respect with u, as a glance at the plan will show. (3) The pottery in the plaster lining of w, x is Roman, in that of u Arab.

For the rest, the vat w is 3 feet $2\frac{1}{2}$ inches deep, and has a sunk circular depression in the corner of its floor 1 foot deep for the collection of dregs. Vat x is 5 feet 5 inches deep, and has a similar depression of similar depth in its corner. In the south-east side of both x and u is a bracket-like step—in the former near the bottom, in the latter 1 foot 5 inches from the top—for facilitating descent. There are two channels connecting w and x: that to the north is 5 inches below the surface, that to the south $3\frac{1}{4}$ inches above the floor. Evidently w is the refining vat, x the receiving vat, of this system. The lower channel was stopped up, and the liquid pressed out on the floors (a or q) was directed into w; the upper channel remained open, and prevented an overflow. The liquid was allowed to stand in w till the sediment had settled, and then the plug was removed from the lower channel, which is just above the level to which sediment would probably accumulate. The refined liquid thus flowed into x. When w was emptied it was probably cleaned out and washed, the last dregs of sediment being drained out of the way into the cup in the corner, and then the process was recommenced. The capacity of the receiving vat is roughly four and a half times that of the refining vat.

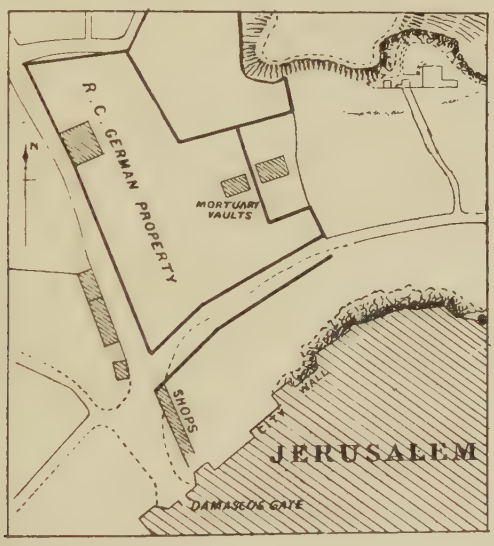
Of the date of this interesting vat there is no definite indication. All the floors were covered, and the vats w, x were lined with plaster. The plaster in the vats shows large fragments of Roman pottery in its composition; and this, together with the mosaic floor, which can hardly be older than the Roman period, may show that the press belongs to that epoch. If the suggestions above made about the relative ages of the various members of the system be tenable, the other vats must belong to a later date.

To the south of this olive press, and now in the basement of the house built near it, is a large columbarium, cylindrical rather than bell-shaped, 18 feet in diameter, 10 feet 6 inches high. Its walls are covered

with square loculi, irregularly spaced out. Columbaria are very rare in the neighbourhood of Jerusalem, though common enough in the neighbourhood of Beit Jibrîn : the present example belongs to the type so frequently represented in that district. I forward a print of a flash-light photograph of part of the wall of this columbarium, taken by Miss Marian Reynolds, of Rosebank, Putney, during a recent visit to Jerusalem, and kindly given to me by her for the use of the Fund.

EXCAVATIONS AT JERUSALEM.[1]

"We have begun to level the 'Paulusplatz' at the Damascus Gate. It is well known that there is an old building there 23 m. long by 16·5 m. wide. During the operations excavations were made along the ancient walls in order to see what they enclosed. . . . . First of all we cleared



away what lay around the great block of rock to the west of the old wall. The block is 3·30 m. long, 1·65 m. wide, and 1 m. high, and rests on two supports 50 cm. high, placed immediately upon the rock. On the eastern side the opening thus formed is walled up, so that

[1] Translated by the Rev. J. E. Hanauer from the Report of the Rev. Father and Procurator P. Dunkel, in *Das Heilige Land* (J. P. Bachem, Cologne, 1902, April, Part II, pp. 91, 92), the organ of the German Society of the Holy Land (formerly the organ of the "Society of the Holy Sepulchre").

under the block there is a free space about 3 m. long and 1·50 m. broad, which was empty. On the western side, in the middle, and in front of the stone block, there was a grave 1·35 m. long, 0·75 cm. broad, and 1·70 m. deep, sunk into the rock. It was full of human bones and bone-dust (Knochenerde). The slightest touch caused everything to fall into dust. There were also found here many small funeral lamps and little tear-jugs, nearly all well preserved. This rock-block with the grave seems to have been the central point of some sepulchral monument to which finely-hewn steps conducted. The height of the steps is 35 cm., and the large, well-worked stones are joined and fitted together without mortar. They are partially preserved on the north and south sides, and quite preserved on the eastern : this is probably the most ancient part. When excavating the eastern steps we found hardly anything but bone-earth, and the same was the case inside the enclosure. In the north-east corner of the enclosure there was a perfectly preserved round arch. The abutments and voussoirs of the other corresponding arches are likewise distinguishable. It seems that a sort of crypt existed over the flag (pavement). It was divided, as is shown by the sketch,[1] into four aisles by three rows of piers.

"The flagstones (of the pavement) covered graves, of which we found, counting from north to south, 15 (rows), each 50 cm. wide and 2·75 m. long,[2] separated from each other by a thin wall. In these there often lay from eight to ten corpses carefully arranged on each other, with their heads pointing westwards and their feet to the east. Small funeral lamps furnished with Christian signs, as well as crosses and coins, show that the dead were Christians. It seems, therefore, that this is the continuation of the great cemetery situated north of the city, of which the Dominicans and the English (Gordon's Grave of Christ) possess the rest. Here, however, there was a separate burial place, disconnected from the rest. The cistern which we found close by is certainly nothing but a sepulchral chamber hewn in the rock. As the coins hitherto found were partly in the *débris* and partly on the pavement, it follows that the graves must be older, and reach back to the sixth and fifth centuries.

"In the highest stratum (bone-earth) there were found coins of the Saracens, in the middle Crusaders' coins, and on the pavement flags coins of Justinian. Here also was found the cross which we shall presently describe. We found—

"(*a*) Two coins of Maurice (582–602), some of the Emperors Justinian, Justinus, and Justinianus (518–527–565).

"(*b*) Many small lamps, jars, and broken tear-bottles.

[1] The sketch alluded to is not reproduced in the German magazine from which the foregoing has been translated.

[2] *Translator's note.*—The graves I measured were 2 mètres long. There were several that seemed longer, but I found that that was due to the crumbling away of the rubble partitions. Since translating the above statement I have pointed this out on the spot to Dr. Wheeler.

"(*c*) Various crosses, amongst them a handsome pectoral cross, 9 cm. long and 5·5 cm. broad. The cross-arms (Kreuzbalken) tend to become smaller towards the centre. On one side is a figure of Christ on the cross. The head is furnished with a nimbus, the body clothed to the feet. The arms are bare, and under the outstretched arms there is a scarcely decipherable Greek inscription.[1] On the crossbeam (Querbalken) there are two figures. On the other side there is a raised figure with a nimbus and uplifted hands (Ecclesia orans?). On the four ends of the arms of the cross are medallions containing figures of the four Evangelists, as is shown by the letters, M Λ I M, marked respectively close to the medallions. This cross may belong to the seventh century, there being a similar one in the Vatican Museum.

"Another cross of like shape, but simpler in execution, formed the lid of a reliquary cross, 6·5 cm. long and 4·5 cm. broad. In the centre of the cross, as well as in the four cross-beams, are hollows (Vertiefungen). Some are still closed with glass.

"A third cross cut out of a metal plate is ornamented at the end of the crossbeams with two corner discs to each. A fragment of chain is still suspended therefrom."

The above was translated by the kind permission of the German Fathers. Besides the information thus obtained, I have learned through Dr. Peters that in the mortuary itself corpses were found lying on the pavement and regularly piled up to a height of about 8 feet. The number of lamps found were on an average of about three to each grave. They are ornamented with the usual conventional designs. Father Dunkel very kindly showed me the coins found and some of the pottery. The most remarkable was a jug or pitcher of glazed earthenware with coloured designs. It reminded me of the old earthenware ranged round the walls of the Knights of St. John's Museum at Valetta, Malta, seen by me in 1865.[2]

[1] Rev. Father Dunkel tells me that it has now been read *ἰδὸν ὁ υἱός σου, ἰδὸν ἡ μήτηρ σου*. It is evident, therefore, that the figures are those of Mary and John.

[2] Dr. Peters tells me that a French Father has suggested that this newly-discovered charnel house may have been the one in use before that at Aceldama was constructed, and that the latter was built because this one was filled up.

DEAD SEA OBSERVATIONS.

By Dr. E. W. G. Masterman.

(*Continued from p.* 299.)

May 30th, 1902.—*Fall of Dead Sea level* since April 26th, 1·5 inch.

Fall of 'Ain el-Feshkhah since April 26th, 0·75 inch.

Rainfall at Jerusalem since April 26th, 0·1 inch.

Temperature, 7.30 A.M.—Air, 78° ; 'Ain el-Mabneyeh, 80·5°.

Weather.—Clouds ; few, cirrus ; mountains fairly clear ; misty to east for a couple of hours after sunrise ; slight mist over sea obscuring south end ; western mountains unusually clear.

State of Dead Sea.—As we approached the 'Ain district the west side of the sea surface appeared clear and glassy ; the eastern slightly broken by small wavelets ; no perceptible wind, but evidently a light breeze from W. arrived at 7.30, and soon after wind veered to S.E. ; small wavelets appeared over sea near us, wind gradually got stronger, and by the time we reached Jericho on our return was a good steady breeze, probably was stronger on the lake than where we were.

White Line.—A slight broken white line could be made out in extreme distance (at least half way across the lake) on our arrival. When wind veered to S.E. became more visible, and as we left about 9.30 and looked back we saw *two* white lines : the outer one very wavy about centre of the lake, but driven ashore to north, the shore near the salt station (at the place usually visited by travellers) being strewn with white foam. The inner line about a mile out opposite the main spring of 'Ain Feshkhah was being driven ashore to the north of the district ; the southern end stretched out in line with west shore till lost in the distance to south of Râs Feshkhah.

Remarks.—Neither Bedawîn nor cattle at 'Ain. Near Wâdy Dabr a Bedawi and his wife, with four donkeys, encountered, engaged in smuggling salt. Salt being a Government monopoly, no one is allowed to touch it, though the business of gathering it is quite neglected. I believe considerable quantities are smuggled to the villages north of Jerusalem. Animals, &c., seen. A single gazelle near Wâdy Dabr. At 'Ain many stone and sand partridges, wood pigeons, and several flocks of Tristram's Grakle.

Fish in Dead Sea.—At our observation rock I was very interested to notice for the first time several small fish actively swimming in the actual sea, *i.e.*, some yard or more from the shore. As I mentioned in my paper on 'Ain Feshkhah (*Quarterly Statement*, April, 1902, p. 165), a considerable quantity of fresh water finds its way out into the sea at this point, and this, of course, dilutes the Dead Sea sufficiently to enable the fish to live, but it is interesting to find fish living, not in a pool, to some

extent cut off from the sea (as at the 'Ain Feshkhah pool), but on the edge of the sea itself. Mr. Hornstein, who was with me, saw these fish independently. They are probably small cyprinodontidæ.

THE CONSTRUCTION OF THE GREAT PYRAMID OF GIZEH.

By Colonel C. M. Watson, C.B., C.M.G., R.E.

In an article which was published in the *Quarterly Statement* for July, 1899, entitled "The Ancient Standards of Measure," Sir Charles Warren discussed the knowledge possessed by the Egyptians of the properties of circles and squares with reference to the design of the Great Pyramid of Gizeh, but he does not appear to have noticed that the dimensions of the Pyramid, curious as they are, can be arrived at by a simple geometrical construction, and that if this construction had been laid out on the ground on a sufficiently large scale, no calculations were necessary to fix the various proportions.

The objects which appear to have been aimed at by the architect of the Pyramid are detailed in the ninth chapter of Professor Flinders Petrie's work, "The Pyramids and Temples of Gizeh." The principal of these were as follows :—

The base of the Pyramid was a square of 440 cubits side.

The height was equal to the radius of a circle, the circumference of which was equal to the perimeter of the base.

The floor of the great chamber, usually called the King's Chamber, was placed at a level above the base, where the area of a horizontal section was equal to half the area of the base of the Pyramid. The diagonal of the square at the level of the King's Chamber was equal to the side of the base, while the side of the square was equal to half the diagonal of the base.

The angle of descent of the entrance passage was at a slope of one over two, and the angle of the ascending passage and great gallery were nearly at the same angles.

I propose to show how these conditions can be met by a simple geometrical construction, and thus to point out how extremely near the results arrived at compare with the actual measurement as carefully made by Professor Petrie.

In the annexed diagram let the square ABCD represent the base of the Pyramid—AC is a diagonal and E the centre of the square.

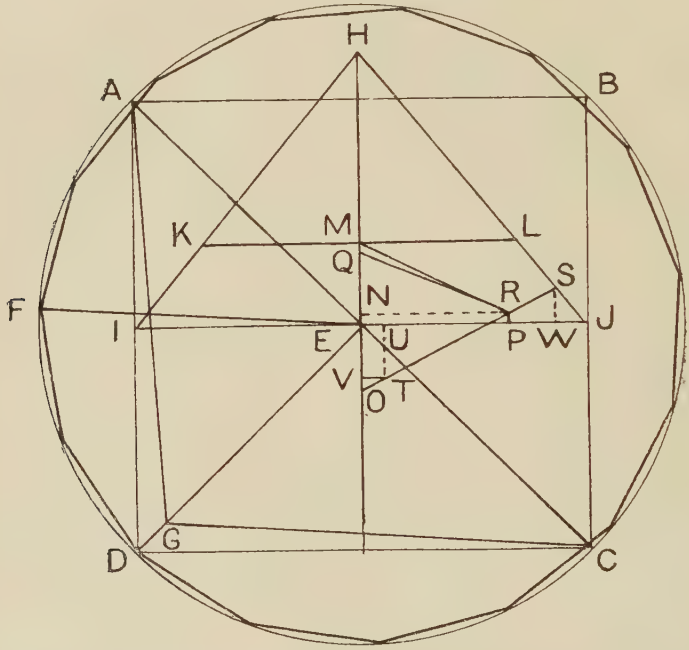
Describe a circle around the square, and in this circle inscribe an equilateral quindecagon ("Euclid," Book IV, Prop. 16) having an angle at D.

Join E to F, the second angle of the quindecagon from D. Draw CG parallel to EF and join AG. Thus will EG be the required height of the Pyramid, and AGC is the vertical section of the Pyramid on a diagonal of the base.

The proof is as follows :—

If the perimeter of the square ABCD was equal to the circumference of a circle of which EG was the radius, $2 \times AB = \pi \times EG$.

$\therefore EG = \frac{2}{\pi} AB$, and if we take $AB = 1$, then $EG = 0{\cdot}63662$.



The length of EG, as given by the geometrical construction, can be calculated as follows :—

As CG is parallel to EF, $CGE = GEF$, but as DF is by construction $\frac{2}{15}$ parts of the whole circumference, the angle $DEF = CGE = \frac{2}{15} 360^\circ = 48^\circ$.

But $\tan CGE = \frac{EC}{EG}$, $\therefore EG = \frac{EC}{\tan 48^\circ}$.

But $EC = \frac{AB}{\sqrt{2}}$, or if, as before, we take $AB = 1$, $EC = \frac{1}{\sqrt{2}}$.

$\therefore EG = \frac{1}{\sqrt{2} \tan 48^\circ} = 0{\cdot}63668$.

It will be seen, therefore, that the height of the Pyramid, as found by the construction, differs from the theoretical height by 0·00006 only, a difference much less than the probable amount of error in the construction of the masonry of the Pyramid.

But to proceed. Make EH equal to EG, and join IH, JH. Thus IHJ represents a vertical section of the Pyramid through the centre on a line perpendicular to the two opposite sides AD, BC.

Draw KL parallel to IJ, and equal in length to the half diagonal AE. Thus KML is a line on the level of the King's Chamber, and the level of this above the base is represented by the vertical line EM.

Make MN, NO, and JP each equal to one-third of EJ, which is equal to half the side of the base of the Pyramid. Draw NR parallel to EJ, and PR perpendicular to EJ meeting in R. Thus R is the point of junction of the descending and ascending passage floors.

Join MR. Join OR, and produce it to S in the line HJ, which represents the sloping side of the Pyramid. Thus MR represents approximately the line of floor of the ascending passage and great gallery, and OPS represents the floor of the descending passage. S is the point where the latter passage cuts the casing of the side of the Pyramid.

It will be seen from the construction that the passages are at the required slope of one over two.

Petrie has shown that the slope of the ascending passage and great gallery is rather less than one over two, and that the floor cuts the centre line of the Pyramid, not at M, but at point Q, which is 33·88 inches below M. He has also shown that the descending passage does not extend to the centre line at O, but that it turns in a nearly horizontal direction at the point T, the distance TV being 306 inches.

The angle of slope of the side of the Pyramid is EJH. The tangent of this angle is $\frac{EH}{EJ}$, and as both of these values are known, it is easy to calculate that EJH = 50° 51′ 24″. It is not necessary to go through the whole of the calculations, but it is evident that taking the data given above, the value of all the different lines in the diagram can be expressed in terms of AB, the side of the base of the Pyramid.

Professor Petrie calculated the value of the side of the base as being equal to 9068·8 inches, and has adduced good reasons for this value. He has, however, in another place given a length of 20·632 inches as the probable best value for the Egyptian cubit to be derived from the Pyramid, and has also stated his opinion that the length of the side was 440 cubits. But 440 × 20·632 = 9078·08 inches. If the latter value is correct, it would simply mean that the original base of the Pyramid was at a slightly lower level than that assumed by Petrie. As, however, I feel a little doubt as to which of the two values is most likely to be correct, I have shown them both in the annexed table, which gives the values of the most important of the Pyramid measures, as derived from the geometrical construction, compared with the actual values of

Table Showing Comparison of Measures found by construction with Actual Measures taken by Dr. Petrie.

Dimensions.	As lettered in Diagram.	Theoretical value, taking value of side of pyramid as given by Petrie.	Actual value as given by Petrie.	Theoretical value, assuming that the side is equal to 440 cubits of 20·632 inches
		Inches.	Inches.	Inches.
Length of side of base	A B	9068·80	9068·80 ± ·5	9078·08
Height of pyramid	E H	5773·90	5776·0 ± 7·0	5779·81
Height to level of King's Chamber..	E M	1691·61	1692·8 ± ·6	1692·88
Height to intersection of descending and ascending passage.	P R	179·14	179·9 ± ·2	179·87
Level of entrance to pyramid	S W	671·21	668·2 ± ·1	672·12
Horizontal distance of entrance from north side of base.	J W	527·11	524·1 ± ·3	527·83
Length of descending passage	S T	4137·89	4139·88	4138·93
Length of ascending passage and great gallery to step.	R Q	3365·17	3362·3	3368·00
Level below base of south end of descending passage.	U T	1178·33	1181·0 ± ·1	1180·14
Inclination of side of pyramid	E J H	51° 51′ 24″	51° 52′ 0″ ± 2′	51° 51′ 24″
Angle of descending passage..	N R T	26° 33′ 54″	26° 31′ 23″	26° 33′ 54″
Angle of ascending passage	N R Q	26° 13′ 1″	26° 12′ 50″	26° 2′ 59″

the same measures, as obtained from the Pyramid by Professor Petrie. Having regard to the care bestowed upon the subject by him, there can be little doubt that the actual measures are as accurate as could be obtained.

It will be seen, by an examination of the table, that the results obtained by taking the base as having a side of 6078·08, are, on the whole, rather nearer to Petrie's measurements than are those derived from a base of 6068·8 as given by him, but it would not be safe to conclude therefore that his base value is too small, as the differences in the values are so trifling that they might be due to errors in construction.

If the architect of the Pyramid had laid out the construction geometrically in the manner indicated above, it would evidently have been necessary for him to have had a smooth, level surface of considerable area to work upon. Such a surface existed on the east side of the Pyramid in the great basalt pavement, which was nearly 180 feet in length and covered more than a third of an acre. It seems to me probable that this pavement formed a gigantic drawing board, upon which the architect laid out the lines of construction of the Pyramid. The angular measurements were most probably laid out by means of the azimuth trenches, the axes of which meet on the west side of the pavement, while the angles of the Pyramid were worked out to full size in the trial passages, which lie to the north of the basalt pavement.

The basalt pavement would also probably have been used as the workshop for fitting together the masonry of the chambers and passages before these were hoisted into their proper places in the Pyramid. The casing stones, too, may have been cut to the proper angles and fitted together on the pavement, the position of which, at the end of the great causeway by which the stones were brought from the Turah quarries, was very conveniently situated for the purpose.

December 27*th*, 1901.

NOTES ON THE JORDAN VALLEY AND PETRA.[1]

By Professor William Libbey, Sc.D.

1. The paper discusses some of the geological features of the Jordan valley, and the connection between the Dead Sea and the Gulf of Akabah.

There seems to be less evidence of a fault with a subsidence upon its eastern side than was supposed. There was, however, undoubtedly a rift valley or fracture, which was widened at a later period. This valley extended from the foot of Mount Hermon southward.

[1] Abstracts of papers read before the British Association Meeting at Belfast, 1902. (Section E.)

The evidence of ice action on the southern slopes of Mount Hermon is very marked. This is not found upon the surface, where abrasion has probably removed all traces of it, but in places where the rocks have been covered up by moraines, which latter have but recently been removed.

From the northern end of this valley, throughout its whole extent, its structure is strongly suggestive of that of a fjord where the ice has been absent for a very long period.

A possible conception of the valley and its mode of formation might be that some time at the close of the cretaceous period this rift was formed. It was then widened and deepened by ice action, at least as far south as the Sea of Galilee, if not throughout its whole length.

After this the surrounding region was submerged by a depression of its surface, due to lateral pressure from the westward. It was at this time that the immense deposits of sandstone took place which were laid down in the valley nearly as far north as the Sea of Galilee. The thickness of these sedimentary deposits was about 4,000 feet, and their character varied, dependent upon the source of the material which was laid down.

Subsequent to this a gradual elevation of the layers took place, and as long as the supply of water was abundant the stream cut its way down through the sandstone, leaving fringe-like remnants on both sides of the valley, as well as an underlying mass in its bed. The protected lateral bays or alcoves on the sides of the main rift were found to be occupied by such deposits. The Lisân Peninsula might be regarded as a more resistant remnant than usual in the bed of the valley.

After this process had continued for a period long enough to bring about the removal of some 3,000 feet of this deposit, a change in the conditions took place, and one of three things happened, possibly all three :—

1. The glacier disappeared.
2. The water-supply failed to a considerable extent.
3. The rate of elevation increased.

Then the course of the water over the top of this sandstone "plug" first became sluggish and finally stopped, thus breaking the connection with the ocean.

From this time onward, while elevation to the extent of about one thousand feet took place, erosion upon this sandstone bed appeared in two directions—northward and southward—and a harder layer than usual, about the middle of the trough connecting the Dead Sea and the Gulf of Akabah, eventually became the turning-point of the waters in both directions.

This process is also illustrated in a similar remnant lying between the Jebel Usdum and the western face of the main limestone walls of the valley throughout the whole length of that peculiar range.

2. Petra is located in one of the larger bays or alcove valleys on the eastern side of the valley connecting the Dead Sea with the Gulf of Akabah. The depth of this bay inland must have been about seven miles.

The immense amount of sandstone here laid down was apparently affected by surface erosion only, as it was withdrawn from the active scouring action which was going on in the main valley to the westward. It therefore rose or was lifted up some 3,000 feet above that valley, while the limestone cliffs, its eastern shore line, still towered above it to the height of 3,000 feet more.

As you look down upon it from the old Roman road on the top of these cliffs, it appears like a tumbled sea of sandstone waves, so rough is its surface.

There is one channel, however, which has persisted in cutting its way down through this sandstone mass from the lower edge of the limestone plateau to a central depression with precipitous walls. This was the entrance to the location of the famous ancient city.

The stream occupying this cleft, after passing through the central valley, plunges headlong down a splendid canyon, through several thousand feet of sandstone to the valley of the Arabah, which lies some five or six miles distant. This latter portion of the Sîḳ is all but impassable ; the upper portion, leading to the site of the city, is easily traversed, in fact it once had a Roman road leading along its winding bottom.

The position of this "Rock City" forms a marked contrast to other "strong places" of Moab, which were usually walled hilltops. It required no less military genius to grasp the elements of its strength and use them as a defence. The sturdy Roman was probably the only invader who became its foreign master, and he succeeded more by craft than by the force of arms.

The strange juxtaposition of its temples and amphitheatre to the thousands of tombs which surrounded them produces a curious impression upon the mind. It seems odd to us that their games and joyous festivals should be celebrated in full view of the solemn porticoes of the last resting-places of their ancestors.

The splendid structures carved in the walls of rock which surrounded their city have resisted the "tooth of time" very remarkably for 1,500 years, considering the soft material in which they are found. The city proper, with the exception of a single temple and part of an arch of triumph, have literally crumbled into dust.

Views of canyon entrance to the city, the chief Latin monuments, the still older Moabite "high places," as well as some pictures taken from Aaron's tomb on Mount Hor, were shown.

NOTICES OF FOREIGN PUBLICATIONS.

Deux Questions d'Archéologie Palestinienne, by P. Barnabé d'Alsace, O.F.M., Jerusalem, 1902, is a discussion of the rival claims of 'Amwâs and Kubeibeh to be the Emmaus of St. Luke.

In Part 1, "The Church at 'Amwâs: Emmaus-Nicopolis," Father Barnabé draws attention to the worthless character of the pamphlet, *Emmaus-Nicopolis*, published by M. Guillemot, in 1887, after his excavations at 'Amwâs. The author of this pamphlet gives no plan of the ruins he uncovered, does not mention the excavations he carried out, and never alludes to the objects found during their progress. Yet, without bringing forward any historical or archæological evidence, he asserts that 'Amwâs is at once the Emmaus of the Maccabees, the Nicopolis of the Romans, and the Emmaus of St. Luke, Josephus, and the Crusaders. He also maintains that the church at 'Amwâs was built by Julius Africanus, about A.D. 222, on the site of the house of the disciple of Emmaus. Father Barnabé also criticises the information supplied by M. Guillemot to Dr. Schiffers, and published in 1890, as being incomplete, inexact, and full of reticence on points that should have been fully noticed.

The unsatisfactory nature of these works led Father Barnabé to make a personal examination of the ruins, so far as was possible without re-excavating the site. His conclusion is that the ruins are those of a Roman bath, which was turned into a church in the sixth century, destroyed by the Persians under Chosroes, and rebuilt by native Christians in the 12th century. He remarks on the number of Jewish tombs in the immediate vicinity of the ruins—one tomb was partly destroyed in cutting away the rock for the building—and very pertinently asks whether the disciple would have built his house in a Jewish cemetery (*see*, however, M. Clermont-Ganneau's description in *Archl. Researches*, vol. i, p. 483*ff*).

Part 2, "The Church at Kubeibeh: the Emmaus of St. Luke," is a *résumé* of all that is known of the history of el-Kubeibeh, followed by strong arguments in favour of its identification with the Emmaus of St. Luke. The conclusion is that the church was originally built in the sixth century, over the ruins of a Jewish house, with the remains of a Roman temple, and that it was restored in the 12th century. There is also a description of the church which was built on the site last year (*see* Schick's notice in *Quarterly Statement*, 1901, p. 165).

In the course of his remarks the author makes the interesting suggestion that the lower Church of St. John at Jerusalem was the baptistery of the Church of the Holy Sepulchre. It may be added that the objects found by M. Guillemot at 'Amwâs have been placed in the Carmelite Monastery at Bethlehem, where they are inaccessible to ordinary mortals.

Recueil d'Archéologie Orientale, vol. v, parts 6–11.—M. Clermont-Ganneau adds some remarks to his previous note on the Phœnician stele from Umm el-'Awâmid (p. 307), and gives a larger photograph of the beautifully fine head of the Phœnician "rab"; and in § 29 he describes other steles, some with inscriptions found at the same place. In remarking on the Arab proverbs collected in Galilee by Mr. Christie (§ 21), the author points out that the meaning of one of them has been misunderstood: it is really the equivalent of the Persian proverb, "Before the antidote is brought from 'Irâk the man bitten by the snake will die." It would appear from a note to the paper, translated in *Quarterly Statement*, 1902, p. 260 *ff.*, that Dr. Musil is about to publish copies of the Greco-Roman frescoes which he found in the castles he discovered east of Moab, and which he supposes to be the work of the Ghassanides. Dr. Musil has also recovered the site of *Nukûb*, a station on the itinerary of Saladin, in Moab; it lies between Lejjûn and Zîza. Translations have already appeared of the papers on the Greek inscriptions found at Beersheba, and on three archaic Hebrew seals. In § 31 M. Ganneau comments on two new inscriptions found on the summit of the Mount of Olives. One forms part of a large mosaic pavement, and gives the names of a priest, deacon, and three monks belonging to one of the religious establishments on the Mount of Olives; the other mentions, in rather barbarous language, a priest of the sanctuary, recently founded, of the Apparition of the Angel—the apparition being that of the angel to the Virgin to warn her of her approaching death. Neither of the inscriptions is dated.

Revue Biblique, vol. xi, part 3.—Father Jaussen completes his valuable list of Bedawî tribes east of Jordan. Father Manfredi, of Medeba, records the discovery at that place of a new mosaic, with an inscription to the effect that "the holy place of the Apostles" was completed in the year 473 (probably A.D. 578–579). There are also notices of the excavations of the Benedictines at Kuryet el-'Enab; a Roman stamp found by Father Cré; a slab, found in a Judæo-Greek tomb between el-Mughar and Jabneh, with a bilingual inscription; of a fragment of an inscription, found north of the Damascus Gate, which is dated the year 448 of the era of Eleutheropolis, or *circ.* 648; and of a jade Egyptian scarab, of uncertain date, found in a tomb at Jerusalem.

C. W. W.

NOTES AND QUERIES.

The Hebrew Name of the Tyropœon Valley.—It must appear strange that the Hebrew name for the Tyropœon (or cheesemakers') Valley has not been recovered yet, whilst the smaller valleys of Hinnom and Kedron are frequently cited. We read in 2 Sam. xii, 31, that David made the Ammonites pass through the "brick-kiln." But this interpretation of the Hebrew מַלְבֵּן is open to great objection, as it is not intelligible why the captives, after having been subjected to three of the worst kinds of torture, should have been taken to a brick-kiln, a kind of torture that needs explanation. Besides, there have never been brick-kilns in Judea, the country being rocky, and all the buildings having been, as they are at the present day, of calcareous stone. The Aramaic Targum of Jonathan ben Uzziel reads וגרר יתהון בשוקיא "And he dragged them along the market" (*lit.* "streets").

Now "laban" in Arabic means milk, sour milk, and especially a sort of fresh cheese, a particular native preparation. I should suggest, therefore, that מלבן in this passage is the name of the *cheese* market, where "laban (cheese)" was made, and that it is identical with the Greek name Tyropœon—*i.e.*, cheesemakers' valley—in Josephus. As the Tyropœon was the principal market in Jerusalem, the tortured captives were taken through this *Šûḳ* in triumph. It is worth adding that the form *malbēn*, in the suggested meaning of a place where cheese was made, is similar to *maktēsh* (Zeph. i, 11), the name of another place in Jerusalem.

In Jeremiah xliii, 9, and in Nahum iii, 14, מַלְבֵּן signifies mortar, but not brick-kiln, which would yield no proper sense, especially in the first-mentioned passage. The Aramaic Targum in both places translates "buildings," referring no doubt to *brick* buildings. May not the meaning of *lebēnah*, originally "mortar" and then "brick," have arisen from its resemblance in colour and softness to fresh cheese?

A. M. Luncz (Jerusalem).

LIST OF DONATIONS AND SUBSCRIPTIONS.

FROM DECEMBER 24TH, 1901, TO MARCH 25TH, 1902.

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aWhittet, Rev. George ..	0	10	6
aWigan, Mrs. A.	1	0	0
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aWillis, Mrs. C. W.	1	1	0
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*a*Binney, Rev. John, D.D. ..	2·50
*a*Billheimer, Rev. T. C., D.D. ..	5·00
*a*Bruckbauer, F., Esq.	10·00
*a*Butler, Miss Virginia	5·00
*a*Carrier, Chas. F., Esq. ..	5·00
Central School Supply Co. (Don.)	5·00
*a*Cone, Mrs. S. B.	5·00
*a*Cranford, J. P., Esq.	5·00
*a*Davis, Rev. Wm. P., D.D. ..	2·50
*a*Dickinson, Miss M. A. ..	5·00
*a*Dudley, Chas. B., Esq. ..	5·00
*a*Hall, Rev. Francis J., D.D. ..	2·50
*a*Haskell, Miss R. A.	5·00
*a*Holmes, David, Esq. ..	2·50
*a*Hoffman, Rev. E. A., D.D. ..	10·00
*a*Leeds, Rev. S. P.	2·50
*a*Little, Prof. G. T.	5·00
*a*Lowrey, Miss R. S.	5·00
*a*Nevin, Rev. J. C., Ph.D. ..	5·00
*a*Newberry Library	2·50
*a*Pearson, Miss E. H.	5·00
*a*Pierrepont, H. E., Esq. ..	10·00
*a*Rittenhouse, W. C., Esq. ..	2·50
*a*Scott, Rev. C. T.	2·50
*a*Smith, Rev. J. W.	2·50
*a*Vaux, George, Esq.	10·00
*a*Votaw, Prof. C. W.	2·50
*a*Welch, C. E., Esq.	5·00
*a*Werren, Rev. J. E.	2·50
*a*Wilson, Rev. J. R., D.D. ..	5·00
*a*Winans, W. P., Esq.	2·50
*a*Wright, Prof. T. F., Ph.D. ..	10·00
*a*Zabriskie, Mrs. N. L.	5·00
Sales of Maps, Books, &c. .	199·78
	$379·78

Received through Rev. H. B. Waterman, D.D., Chicago:

*a*Blackstone, T. B., Esq. ..	2·50
*a*Garrett Biblical Institute ..	2·50
*a*Revell, F. H., Esq.	2·50
	$387·28

ABERDEEN.

Miss Mary Forbes, *Hon. Sec.*

	£	s.	d.
March 12.—By cash ..	7	19	6
Collection expenses ..	0	6	0
	£8	5	6

	£	s.	d.
*a*Allan, David, Esq.	0	10	6
Anderson, Mrs. (Don.)	0	2	6
*a*Burnett, C. J., Esq.	0	10	6
*a*Davidson, Miss M. M. ..	0	10	6
*a*Doak, Rev. Andrew	0	10	6
*a*Forbes, Miss Mary	0	10	0
*a*Henderson, Sir Wm.	1	1	0
*a*Hunter, William, Esq. ..	0	10	6
*a*Hutchinson, Thos., Esq. ..	0	10	6
M. (Don.)	0	2	6
*a*Mitchell, Stodart J., Esq. ..	0	5	0
*a*Spence, Miss	1	0	0
*a*Stephenson, William, Esq., M.D.	0	10	6
*a*Stewart, Dr.	0	10	6
*a*Stewart, Sir David	0	10	0
*a*Thompson, George, Esq. ..	0	10	6
	£8	5	6

BEIRUT.

E. G. Freyer, Esq., *Hon. Sec.*

	£	s.	d.
Jan. 13.—By cash ..	5	15	6
Jan. 30.— „ ..	2	5	0
	£8	0	6

	£	s.	d.
*a*Freyer, E. G., Esq.	0	10	6
*a*Hardin, Rev. O. J.	0	10	6
*a*Jessup, Rev. H. H., D.D. ..	0	10	6
*a*Khouri, K., Esq.	0	10	6
*a*Kitching, Miss L.	0	10	6
*a*Manasseh, Dr. B. J.	0	10	6
*a*Phillips, Rev. J. S.	0	10	6
*a*Porter, Rev. H., Ph.D. ..	0	10	6
*a*Richards, W. S., Esq. ..	1	1	0
*a*Sarruf, Ninir, and Macarius, Messrs.	0	10	6
*a*Segall, Rev. J.	0	10	6
*a*Soutar, Rev. John	0	10	6
*a*Wilson, Dr. George	0	10	6
Sales of books, maps, &c. ..	0	13	6
	£8	0	6

BATH.

General Warren Walker, R.E., *Hon. Sec.*

Feb. 26.—By cash .. £4 4*s.* 0*d.*

	£	*s.*	*d.*
*a*Austin, Miss Rose	1	1	0
*a*Farewell, Major-General ..	1	1	0
*a*Hewitt, Hon. Miss A. G. ..	0	10	6
*a*Winwood, Rev. H. H. ..	0	10	6
*a*Walker, General G. W., R.E.	1	1	0
	£4	4	0

BELFAST.

Sir Wm. Q. Ewart, Bart., *Hon. Sec.*

March 17.—By cash .. £20 1*s.* 6*d.*

	£	*s.*	*d.*
*a*Crawford, Wm., Esq. ..	1	0	0
*a*Cuthbert, Jos., Esq., J.P. ..	0	10	0
*a*Dixon, Sir Daniel, D.L. ..	1	0	0
*a*Dunleath, The Right Hon. Lord	1	0	0
*a*Ewart, Lady Isabella ..	1	0	0
*a*Ewart, Miss	1	0	0
*a*Ewart, Sir Wm. Q., Bart. ..	1	0	0
*a*Ewart, Lady	1	0	0
*a*Hamilton, Rev. Thomas, D.D.	0	10	6
*a*Harland, Lady	1	0	0
*a*Inverclyde, The Right Hon. Lord	1	0	0
*a*Jaffe, Sir Otto, J.P.	1	0	0
*a*Johnston, S. A., Esq., J.P. ..	1	0	0
*a*McBride, Messrs. R., and Co.	1	0	0
*a*MacLaine, George L., Esq...	1	1	0
*a*McNeile, H. H., Esq., D.L...	1	0	0
*a*Reade, R. H., Esq., D.L. ..	1	0	0
*a*Richardson Bros. and Co., Messrs.	1	0	0
*a*Sinclair, The Right Hon. Thomas, D.L.	1	0	0
*a*Workman, John, Esq., J.P...	1	0	0
*a*Young, The Right Hon. John, D.L.	1	0	0
	£20	1	6

DUBLIN.

Rev. E. H. Lewis Crosby, *Hon. Sec.*

Jan. 29.—By cash .. £2 12*s.* 6*d.*

	£	*s.*	*d.*
*a*Caldwell, Mrs.	0	10	6
*a*Day, Rev. Canon	0	10	6
*a*Large, Rev. W. Somerville ..	1	1	0
*a*Stewart, Miss	0	10	6
	£2	12	6

EDINBURGH.

Geo. Harvey Johnston, Esq., *Hon. Sec.*

	£	*s.*	*d.*
March 24.—By cash ..	51	17	6
Postages	0	7	6
	£52	5	0

	£	*s.*	*d.*
*a*Agnew, Colonel	1	1	0
*a*Alexander, Mrs. B.	1	1	0
*a*Barbour, A. H. F., Esq., M.D.	1	0	0
*a*Bartholomew, John G., Esq..	0	10	0
*a*Bell, Mrs. H. Glassford ..	1	0	0
*a*Bonar, Miss	0	10	6
*a*Bonar, Horatius, Esq., W.S.	0	10	6
*a*Brown, Rev. J. Wood ..	0	10	6
*a*Brown-Douglas, Miss A. ..	0	10	6
*a*Brown-Douglas, Miss E. ..	0	10	6
*a*Bryce, Wm., Esq., M.D. ..	0	10	6
*a*Cadell, H. M., Esq.	0	10	0
*a*Charteris, Rev. A. H., D.D...	0	10	0
*a*Cook, Miss	0	10	6
*a*Dalgleish, J. J., Esq... ..	0	10	6
*a*Dalgleish, Lawrence, Esq. ..	0	10	6
*a*Davidson, Rev. Geo., B.Sc. ..	0	10	6
*a*Duns, Prof., D.D.	0	10	6
*a*Duncan, Miss	0	5	0
*a*Edinburgh Public Library ..	1	1	0
*a*Elliot, Andrew, Esq... ..	0	10	6
*a*Forlong, General	0	10	0
*a*Forrester, Henry, Esq. ..	1	1	0
*a*Ford, the late John	1	1	0
*a*Galloway, W. F., Esq. ..	1	1	0
*a*Gall and Inglis, Messrs. ..	1	1	0
*a*Gartshore, Miss Murray ..	1	1	0
*a*G. C.	1	0	0
*a*Gibson, James P., Esq. ..	0	10	6
*a*Henderson, Miss	0	10	6
*a*Howden, John A., Esq. ..	1	1	0
*a*Hunter, Mrs.	0	2	6
*a*Jamieson, J. A., Esq... ..	0	10	6
*a*Jeffrey, Mrs. D.	1	0	0
*a*Johnston, Geo. Harvey, Esq.	1	1	0
*a*Kalley, Mrs.	0	10	6
*a*Kennedy, Rev. Prof., D.D. ..	1	1	0
*a*Kennedy, the late John ..	1	0	0
*a*Luke, Rev. Alex.	0	10	6
*a*MacDougall, Mrs. and Miss..	1	1	0
*a*McDougall, Rev. D.	0	10	6
*a*MacEwen, Rev. Prof. ..	1	0	0
*a*Mackenzie, Miss	2	0	0
*a*Maclagan, R. E., Esq., M.D.	0	10	0
*a*McMicking, Miss	1	0	0
*a*Macphail, Rev. Dr.	0	10	6
Carried forward	£34	9	0

	£	s.	d.
Brought forward	34	9	0
*a*Mill, Peter, Esq.	0	10	6
*a*Muir, Rev. R. H.	1	1	0
*a*Nelson, Messrs. Thomas and Son	1	0	0
*a*New College (per Rev. J. Kennedy)	0	10	6
*a*Norrie, J. R., Esq.	0	10	6
*a*Rainy, Rev. Principal, D.D..	0	10	6
*a*Robertson, Wm., Esq. ..	0	10	6
*a*Robertson, Chas. S., Esq. ..	0	10	6
*a*Robson, Wm., Esq.	0	5	0
*a*Rogerson, J. J., Esq., LL.D.	0	10	0
*a*Simpson, James, Esq. ..	1	1	0
*a*Simpson, Prof., M.D.. ..	1	1	0
*a*Skirving, A., Esq.	1	0	0
*a*Stalker, R. B., Esq.	0	10	6
*a*Stevenson, The Misses ..	1	0	0
*a*Stevenson, Miss M. A. M. ..	0	10	6
*a*Stewart, Mrs. A.	1	1	0
*a*Stuart, Mrs.	0	10	6
*a*Sydserff, Thos., Esq.	1	1	0
*a*Teape, Rev. Dr.	0	5	0
*a*Thin, James, Esq.	0	10	6
*a*Union Mutual Association ..	0	10	6
*a*Usher, Messrs. Andrew, and Co.	0	10	6
*a*Usher, Sir John, of Norton ..	1	0	0
*a*Whyte, Rev. Alex., D.D. ..	1	0	0
*a*Wilson, Rev. J. H., D.D. ..	0	5	0
	£52	5	0

FOLKESTONE.

Rev. E. H. Cross, D.D., *Hon. Sec.*

	£	s.	d.
Jan. 22.—By cash ..	2	7	0
Feb. 24.— „ ..	3	7	6
March 8.— „ ..	1	1	0
	£6	15	6

	£	s.	d.
*a*Bradley, H. B., Esq... ..	1	1	0
*a*Brockman, A. D., Esq. ..	0	10	6
*a*Cotton, Sir George	0	5	0
*a*Flint, W. W., Esq.	1	1	0
*a*Griffiths, A. F. C., Esq. ..	0	10	6
*a*Harrison, Mrs.	0	5	0
*a*Jephson, Miss..	0	10	6
*a*Sugden, Miss	0	10	6
*a*Waley, Alfred J., Esq. ..	1	1	0
*a*Warde, Mrs.	0	10	6
*a*Woodward, Mrs.	0	10	0
	£6	15	6

FROME.

Henry Thompson, Esq., *Hon. Sec.*

Jan. 25.—By cash .. £1 11*s.* 6*d.*

	£	s.	d.
*a*Daniel, G. A., Esq.	0	10	6
*a*Daniel, Rev. W. E.	0	10	6
*a*Wiltshire, G. W., Esq. ..	0	10	6
	£1	11	6

GALASHIELS.

Kenneth Cochrane, Esq., *Hon. Sec.*

	£	s.	d.
Jan. 4.—By cash	0	10	6
Jan. 7.— „	0	10	6
Feb. 1.— „	9	9	0
	£10	10	0

	£	s.	d.
*a*Brown, Adam, Esq.	1	1	0
*a*Cochrane, Kenneth, Esq. ..	1	1	0
*a*Dickson, John, Esq.	0	10	6
*a*Dickson, A. Anderson, Esq...	0	10	6
*a*Dickson, G. P., Esq.	0	10	6
*a*Dickson, James, Esq. ..	1	1	0
*a*Fairgrieve, Thomas, Esq. ..	0	10	6
*a*Hebertson, Adam, Esq. ..	0	10	6
*a*Hunter, Rev. D., D.D. ..	0	10	6
*a*Matheson, Rev. W. S. ..	0	10	6
*a*Sanderson, James, Esq. ..	1	1	0
*a*Sanderson, W. A., Esq. ..	1	1	0
*a*Somerville, R., Esq., M.D....	0	10	6
*a*Thomson, Rev. W. Burnet, M.A..	0	10	6
*a*Thomson, Andrew, Esq. ..	0	10	6
	£10	10	0

GLASGOW.

Rev. Prof. Wm. P. Dickson, D.D., Right Rev. Donald Macleod, D.D., Rev. Prof. George Adam Smith, D.D., *Hon. Secs.*

James Glen, Esq., 194, St. Vincent Street, *Hon. Treas.*

March 25.—By cash.. £21 7*s.* 6*d.*

	£	s.	d.
*a*Allan, Robert S., Esq. ..	1	1	0
*a*Bell, Sir James	2	2	0
*a*Brown, John, Esq.	2	2	0
*a*Buchanan, Colonel Sir D. C. R. Carrick, K.C.B.	1	1	0
Cuthbertson, Sir J. Neilson (Don.)	0	10	0
Carried forward	£6	16	0

	£	s.	d.
Brought forward	6	16	0
*a*Daly, Rev. J. Fairley, B.D. ..	0	10	6
*a*Forrest, Rev. D. W., M.A. ..	0	10	6
*a*Free Church College Library	1	1	0
*a*Glen, James, Esq.	1	1	0
*a*Gow, Leonard, Esq.	1	1	0
Honeyman, Michael, Esq. (Don.)	0	10	0
*a*Kerr, Wm., Esq.	1	1	0
*a*McCreath, James, Esq. ..	1	1	0
*a*Macleod, Right Rev. Donald, D.D.	1	0	0
Marwick, Sir James D. (Don.)	1	0	0
*a*Mitchell, G. A., Esq... ..	0	10	6
*a*Napier, James S., Esq. ..	1	1	0
*a*Robertson, Rev. Prof., D.D.	1	1	0
*a*Stuart, Prof. Moody	1	1	0
*a*Taylor, Rev. Walter Ross ..	0	10	6
*a*Weir, Rev. T. H.	0	10	6
*a*Yellowless, D., Esq., M.D., LL.D...	1	1	0
	£21	7	6

HITCHIN.

J. Pollard, Esq., *Hon. Sec.*

Feb. 24.—By cash .. £4 14*s.* 6*d.*

	£	s.	d.
*a*Bathurst, Archdeacon ..	0	10	6
*a*Gatward, Miss F.	0	10	6
*a*Pollard, J., Esq.	1	1	0
*a*Priest, T., Esq.	0	10	6
*a*Ransom, W., Esq.	1	1	0
*a*Seebohm, F., Esq.	1	1	0
	£4	14	6

JERUSALEM.

Dr. Percy D'Erf Wheeler, *Hon. Sec.*

March 22.—Per Messrs. Thos. Cook and Sons, £19 19*s.* 0*d.*

	£	s.	d.
*a*Beckholt, P., Esq.	0	10	6
*a*Blyth, Bishop..	0	10	6
*a*Clark, H., Esq.	0	10	6
*a*Cook, Messrs. Thos. and Sons	0	10	6
*a*Credit Lyonnais	0	10	6
*a*D'Arbella, Dr.	0	10	6
*a*Dickson, John, Esq.	0	10	6
*a*Durand, Rev. Germer ..	1	1	0
*a*Eaton, Alderman John ..	1	1	0
*a*Fergusson, J. C., Esq., M.D...	0	10	6
*a*Fitzjohn, Miss E. C... ..	0	10	6
*a*Floyd, Rolla, Esq.	0	10	6
*a*Heilpern, B., Esq.	0	10	6
Carried forward	£7	17	6

	£	s.	d.
Brought forward	7	17	6
*a*Hensman, E. G., Esq. ..	0	10	6
*a*Hornstein, Charles, Esq. ..	0	10	6
*a*Kübler, J., Esq.	0	10	6
*a*Lunn, Edward, Esq., M.D. ..	0	10	6
*a*Michailoff, Mons. N... ..	0	10	6
*a*Morcom, Alfred, Esq. ..	0	10	6
*a*Morcos, Messrs. A. and J. ..	0	10	6
*a*Raad, Mr. Khalil	0	10	6
*a*Schick, Dr.	0	10	6
*a*Watkins, Rev. Archdeacon ..	1	1	0
*a*Way, Mrs. E...	1	1	0
*a*Wheeler, Dr. Percy D'Erf ..	0	10	6
*a*Wilson, John, Esq., M.P. ..	0	10	6
*a*Wilson, Rev. C. T.	0	10	6
*a*Winch, George, Esq... ..	1	1	0
Half proceeds of Lecture given by Mr. Macalister at Jerusalem, January 3rd	2	12	6
	£19	19	0

LEDBURY.

Rev. F. S. Stooke-Vaughan, *Hon. Sec.*

March 19.—By cash .. £2 2*s.* 0*d.*

	£	s.	d.
*a*Black, Rev. C.	0	10	6
*a*Curtis, Rev. G.	1	1	0
*a*Stooke-Vaughan, Rev. F. S.	0	10	6
	£2	2	0

LIVERPOOL.

A. B. Thorburn, Esq., *Hon. Sec.*
T. F. A. Agnew, Esq., *Hon. Treas.*

	£	s.	d.
March 17.—By cash ..	10	19	6
,, 24.— ,, ..	0	10	6
	£11	10	0

	£	s.	d.
*a*Agnew, T. F. A., Esq. ..	1	1	0
*a*Allan, R. G., Esq.	0	10	6
*a*Armour, Rev. Canon.. ..	0	10	6
*a*Benas, Baron L., Esq. ..	0	10	6
*a*Brancker, John, Esq. ..	1	1	0
*a*Gair, H. W., Esq.	1	1	0
*a*Hadwen, Miss..	0	10	6
*a*Hill, Gray, Esq.	1	1	0
*a*Mathieson, N., Esq.	1	0	0
*a*Moore, J. Murray, Esq., M.D.	0	10	6
*a*Ogden, Thos., Esq.	0	10	6
*a*Paton, A. B., Esq.	1	1	0
*a*Philip, George, Esq.	1	1	0
*a*Thorburn, A. B., Esq. ..	1	1	0
	£11	10	0

MANCHESTER.

C. J. Heywood, Esq., *Hon. Treas.*
Rev. W. F. Birch, *Hon. Sec.*

March 17.—By cash .. £8 8*s.* 0*d.*

	£	*s.*	*d.*
*a*Armistead, R., Esq.	0	10	6
*a*Robinson, John, Esq. ..	2	2	0
*a*Robinson, Oswald, Esq. ..	1	1	0
*a*Robinson, Robert, Esq. ..	1	1	0
*a*Rymer, Thos., Esq.	1	1	0
*a*Rymer, T. H., Esq.	1	1	0
*a*Sharp, Misses..	1	1	0
*a*Stowell, Rev. Canon	0	10	6
	£8	8	0

MONTREAL.

Rev. G. Abbott-Smith, *Hon. Sec.*

Jan. 13.—By cash .. £3 1*s.* 7*d.*

	Dols.
*a*Abbot-Smith, Rev. G... ..	5·00
*a*Hague, George, Esq.	5·00
*a*Rexford, Rev. E. I.	5·00
Sales of maps, &c.	10·00
	$25·00

MOUNTAIN ASH.

Rev. Owen Jones, *Hon. Sec.*

Feb. 13.—By cash .. £0 10*s.* 6*d.*

	£	*s.*	*d.*
*a*Morgan, Morgan, Esq., J.P...	0	10	6

NEWCASTLE-ON-TYNE.

A. Brooke Lloyd, Esq., *Hon. Sec.*

Jan. 17.—By cash .. £3 1*s.* 0*d.*

	£	*s.*	*d.*
*a*Joicey, Mrs. E.	2	0	0
*a*Lloyd, A. Brooke, Esq. ..	0	10	6
*a*Tennant James, Esq. ..	0	10	6
	£3	1	0

NORWICH.

Rev. F. Knowles, M.A., *Hon. Sec.*

	£	*s.*	*d.*
Jan. 13.—By cash ..	1	1	0
Feb. 20.— „ ..	1	1	0
	£2	2	0

	£	*s.*	*d.*
*a*Holden, Rev. J.	1	1	0
*a*Le Pelley, Rev. J. L... ..	1	1	0
	£2	2	0

PERTH.

Rev. P. A. Gordon Clark, *Hon. Sec.*

Feb. 6.—By cash .. £9 12*s.* 0*d.*

	£	*s.*	*d.*
*a*Baxter, Rev. G. C.	0	10	6
*a*Coates, James, Esq.	0	10	6
*a*Crawford, Rev. Thomas, B.D.	0	10	6
*a*Fraser, J. M., Esq.	2	0	0
*a*Glen-Kippen, Rev. J. J. ..	0	10	6
*a*McEwen, James, Esq. ..	1	1	0
*a*McNeill, John, Esq... ..	0	10	6
*a*Pullar, Sir Robert	2	2	0
*a*Pullar, James, Esq.	1	1	0
*a*Robson, Rev. Dr.	0	10	6
*a*Thomas, John, Esq.	0	5	0
	£9	12	0

PLYMOUTH.

H. B. S. Woodhouse, Esq., *Hon. Sec.*

Jan 4.—By cash .. £5 5*s.* 0*d.*

	£	*s.*	*d.*
*a*Brown, J. P., Esq., J.P. ..	1	1	0
*a*Mitchell, T. H., Esq... ..	1	1	0
*a*Woodhouse, Mrs.	1	1	0
*a*Woodhouse, H. B. S., Esq. ..	2	2	0
	£5	5	0

SALISBURY.

J. Lardner Green, Esq., M.R.C.S., F.R.M.S., *Hon. Sec.*

March 18.—By cash .. £6 18*s.* 0*d.*

	£	*s.*	*d.*
*a*Bernard, Rev. Chancellor ..	1	1	0
*a*Bourne, Rev. Dr.	0	10	6
*a*Brown Street Sunday School	0	10	6
*a*Burrows, Miss	0	2	6
*a*Green, J. Lardner, Esq. ..	0	10	6
*a*Griffin, Frederic, Esq. ..	0	10	6
*a*Hutchings, Rev. Canon ..	1	0	0
*a*Myers, Rev. Chas.	0	10	6
*a*Powell, Miss	0	10	6
*a*Pye-Smith, E. F., Esq. ..	0	10	6
*a*Rawlence, Ernest A., Esq. ..	1	1	0
	£6	18	0

SHREWSBURY.

Rev. C. H. Drinkwater, *Hon. Sec.*

March 5.—By cash .. £0 10*s.* 6*d.*

	£	*s.*	*d.*
*a*Nicolls, Miss	0	10	6

SOUTHPORT.

H. J. Bailey, Esq., M.D., *Hon. Sec.*

	£	s.	d.
Feb. 10.—By cash ..	0	10	6
„ 24.— „ ..	1	1	0
	£1	11	6

	£	s.	d.
*a*Coop, F., Esq...	1	1	0
*a*Cooper, Rev. F.	0	10	6
	£1	11	6

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	£	s.	d.
*a*Backhouse, Mrs.	1	1	0
*a*Cradock, J., Esq.	0	10	6
*a*Mounsey, E. B., Esq. ..	1	1	0
*a*Mounsey, Miss L. E... ..	1	1	0
*a*Pumphrey, T. W., Esq. ..	0	10	6
*a*Robinson, C., Esq.	0	10	6
*a*Wrightson, Sir Thos., Bart...	1	1	0
	£5	15	6

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	£	s.	d.
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*a*Dorph, W. P. F., Esq. ..	0	10	6
*a*Garland, C. F., Esq... ..	0	10	6
	£1	11	6

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	£	s.	d.
*a*Currie, George, Esq... ..	0	10	6

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Jan. 17.—By cash .. £1 15*s.* 6*d.*

	£	s.	d.
*a*Rossiter, Dr...	0	5	0
*a*Roxburgh, Dr.	0	5	0
*a*Stephens, Miss	0	10	0
*a*Stevens, Rev. M. O.	0	5	0
*a*Tomkins, Rev. H. G... ..	0	10	6
	£1	15	6

SUMMARY OF LOCAL SOCIETIES.

(Acknowledged in detail under special heading.)

	Sales of Books, Maps, &c.	Lectures.	Subscriptions and Donations.
	£ s. d.	£ s. d.	£ s. d.
Aberdeen	—	—	7 19 6
Bath	—	—	4 4 0
Beirut	0 13 6	—	7 7 0
Belfast	—	—	20 1 6
Dublin	—	—	2 12 6
Edinburgh	—	—	51 17 6
Folkestone	—	—	6 15 6
Frome	—	—	1 11 6
Galashiels	—	—	10 10 0
Glasgow	—	—	21 7 6
Hitchin	—	—	4 14 6
Jerusalem	—	2 12 6	17 6 6
Ledbury	—	—	2 2 0
Liverpool	—	—	11 10 0
Manchester	—	—	8 8 0
Montreal	—	—	3 1 7
Mountain Ash	—	—	0 10 6
Newcastle-on-Tyne	—	—	3 1 0
Norwich	—	—	2 2 0
Perth	—	—	9 12 0
Plymouth	—	—	5 5 0
Salisbury	—	—	6 18 0
Shrewsbury	—	—	0 10 6
Southport	—	—	1 11 6
Stockton-on-Tees	—	—	5 15 6
Sydney	—	—	1 11 6
United States of America	40 19 7	—	38 4 10
Victoria	—	—	0 10 6
Weston-super-Mare	—	—	1 15 6
	£41 13 1	£2 12 6	£258 17 5

SUMMARY OF RECEIPTS.

From December 24th, 1901, to March 25th, 1902.

	£ s. d.
Annual Subscriptions and Donations	317 7 3
Annual Subscriptions from Local Societies	258 17 5
Proceeds of Lectures	2 12 6
Total Sales of Books, Maps, and other Publications	110 17 9
	£689 14 11

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	£	*s.*	*d.*
*a*Allchin, Rev. Arthur . ..	0	10	6
Amherst of Hackney, Lord (Don.)	10	0	0
*a*Andrews, R. T., Esq... ..	1	0	0
*a*Angus, C. J., Esq.	0	10	0
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*a*Downward, Miss H.	0	10	6
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*a*Dyke, T., Esq.	0	10	6
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*a*Eyre, Rev. E. G. Phipps ..	0	10	6
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Carried forward	£44	9	6

	£	*s.*	*d.*
Brought forward	44	9	6
*a*Freer, Miss Goodridge ..	0	10	6
*a*Freer, Mrs.	0	10	6
*a*Green, Rev. James	0	10	6
*a*Grove, Miss	0	10	6
*a*Guthe, Professor Dr... ..	0	10	6
*a*Hamel, Rev. E. T.	1	1	0
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*a*Hay, Major A. E.	1	0	0
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*a*Hewitson, Rev. J. R... ..	0	10	6
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Hilton, James, Esq., F.S.A. (Special Don.)	10	0	0
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*a*Jones, R. Hesketh, Esq. ..	1	1	0
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*a*Durham University ..	1	1	0
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Carried forward	£77	18	5

	£	s.	d.
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Carried forward	£111	3	11

	£	s.	d.
Carried forward	111	3	11
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*a*Williams, Major C. S. ..	0	10	6
*a*Woosman, Miss	0	10	6
*a*Wyndham, Rev. F. M. ..	0	10	6
*a*Young, A. W., Esq.	2	2	0
	£133	10	5

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June 10.— „ ..	12	8	11
	£33	4	1

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Sales of Maps, Books, &c. ..	10·42
	$162·92

BANGOR, NORTH WALES.

T. Witton Davies, B.A., Ph.D., *Hon. Sec.*

May 11.—By cash .. £0 10*s.* 6*d.*

	£	*s.*	*d.*
*a*Davies, T. Witton, Esq. ..	0	10	6

BRISTOL AND CLIFTON.

Rev. Canon Wallace, *Hon. Sec.*

March 29.—By cash .. £4 12*s.* 6*d.*

	£	*s.*	*d.*
*a*Bevan, Rev. E. A.	1	1	0
*a*Bird, E. W., Esq.	0	10	6
*a*Harvey, E. A., Esq.	1	1	0
*a*Mather, Rev. Canon	0	5	0
*a*Moore, Miss	0	5	0
*a*Rollo, Lord	1	0	0
*a*Wallace, Rev. Canon.. ..	0	10	0
	£4	12	6

DARLINGTON.

J. P. Pritchett, Esq., *Hon. Sec.*

June 20.—By cash .. £4 2*s.* 3*d.*

	£	*s.*	*d.*
*a*Backhouse, Sir J. E., Bart...	1	1	0
*a*Pease, Mrs. Gurney	2	0	0
*a*Pritchett, J. P., Esq. ..	0	10	6
Quarterly Statements ..	0	10	9
	£4	2	3

DUBLIN.

Rev. E. H. Lewis Crosby, *Hon. Sec.*

	£	*s.*	*d.*
March 27.—By cash ..	0	10	6
May 26.— „ ..	1	1	0
	£1	11	6

	£	*s.*	*d.*
*a*Hayes, Rev. F. C. (1900–1901)	1	1	0
*a*Smith, Rev. Canon	0	10	6
	£1	11	6

DUNFERMLINE.

Rev. John Campbell, *Hon. Sec.*

May 22.—By cash .. £2 16*s.* 6*d.*

	£	*s.*	*d.*
Campbell, Rev. John ..	0	5	0
*a*Inglis, William, Esq. ..	1	0	0
*a*McFarlane, James, Esq. ..	0	10	6
*a*McLaren, William, Esq. ..	0	10	6
*a*Ross, John, Esq.	0	10	6
	£2	16	6

FOLKESTONE.

Rev. E. H. Cross, D.D., *Hon. Sec.*

	£	*s.*	*d.*
April 24.—By cash ..	2	1	0
May 22.— „ ..	1	11	6
June 18.— „ ..	2	1	6
	£5	14	0

	£	*s.*	*d.*
*a*Condy, Miss	0	5	0
*a*Dawson, J. W., Esq... ..	1	1	0
*a*Larking, A. E., Esq., M.D. ..	0	5	0
*a*Melvil, Mrs.	0	10	6
*a*Parr, Mrs.	1	1	0
*a*Sturt, Mrs. Napier	1	1	0
*a*Ward, E. T., Esq., J.P. ..	0	10	6
*a*Watkin, Lady	1	0	0
	£5	14	0

GLASGOW.

Right Rev. Donald Macleod, D.D., Rev. Prof. George Adam Smith, D.D., *Hon. Secs.*

James Glen, Esq., 194, St. Vincent Street, *Hon. Treas.*

April 21.—By cash .. £1 7*s.* 6*d.*

	£	*s.*	*d.*
*a*Smith, Rev. Prof. George Adam, D.D.	1	1	0

GLYN-NEATH.

Rev. J. Ll. Thomas, M.A., *Hon. Sec. and Lecturer for the Fund.*

March 30.—By cash .. £1 1*s.* 0*d.*

	£	*s.*	*d.*
*a*Llewelyn, Sir J. T. D., Bart., M.P.	0	10	6
*a*Thomas, Rev. J. Ll., M.A. ..	0	10	6
	£1	1	0

HULL.

Wm. Botterill, Esq., *Hon. Sec.*

May 23.—By cash .. £3 3*s.* 0*d.*

	£	*s.*	*d.*
*a*Botterill, Wm., Esq... ..	0	10	6
*a*Brown, John, Esq.	0	10	6
*a*Holmes, S. H., Esq., J.P. ..	0	10	6
*a*Holmes, Thos. B., Esq., J.P.	1	1	0
*a*Hull Subscription Library ..	0	10	6
	£3	3	0

JERUSALEM.

Dr. Percy D'Erf Wheeler, *Hon. Sec.*

1.—By cash, per Messrs. Thos. Cook and Sons, £11 0*s.* 9*d.*

	£	*s.*	*d.*
*a*Cox, John A., Esq.	0	10	6
*a*Dunn, Mr.	0	10	6
*a*Hall, J., Esq.	0	10	6
*a*Hall, Rev. J. R. Longley ..	0	10	6
*a*Hood, Miss Cockburn ..	1	1	0
*a*Lunn, W. Holdsworth, Esq.	1	1	0
*a*Olney, Miss M. K.	0	10	6
*a*Pearse, Mark Guy, Esq. ..	1	1	0
*a*Ranger, Mrs.	1	1	0
*a*Smith, Dr. Heywood.. ..	1	1	0
Half proceeds of Lecture by Dr. Wheeler	2	12	6
QUARTERLY STATEMENTS ..	0	10	9
	£11	0	9

LLANDAFF DEAF AND DUMB SCHOOL, CARDIFF.

Mrs. Melville, *Hon. Sec.*

April 13.—By cash .. £5 2*s.* 0*d.*

	£	*s.*	*d.*
*a*Mrs. Bailey	0	5	0
*a*Bishop of Llandaff	0	10	6
*a*Brown, Mrs. J.	0	10	6
*a*Cory, John, Esq.	2	2	0
Jenner, Miss H. G.	0	2	6
*a*Kaye, Mrs.	0	10	6
*a*Vachell, Mrs.	0	10	6
*a*Williams, J. A. B.	0	10	6
	£5	2	0

LIVERPOOL.

A. B. Thorburn, Esq., *Hon. Sec.*
T. F. A. Agnew, Esq., *Hon. Treas.*

	£	*s.*	*d.*
April 11.—By cash ..	1	1	0
„ 19.— „ ..	0	10	6
June 5.— „ ..	0	10	6
„ 19.— „ ..	0	10	6
„ 21.— „ ..	3	12	6
	£6	5	0

	£	*s.*	*d.*
*a*Fischer, J. J., Esq.	0	10	6
*a*Gardner, Henry, Esq. ..	0	10	6
*a*Good, Miss, 1901–1902 ..	1	1	0
*a*Mathieson, N., Esq., 1901 ..	1	0	0
*a*Philip, George, Esq., 1901 ..	1	1	0
*a*Philip, Sons and Nephew ..	1	1	0
*a*Walker, Horace, Esq., 1901..	1	1	0
	£6	5	0

MANCHESTER.

C. J. Heywood, Esq., *Hon. Treas.*
Rev. W. F. Birch, *Hon. Sec.*

June 9.—By cash .. £2 12*s.* 6*d.*

	£	*s.*	*d.*
*a*Bardsley, Robert, Esq. ..	1	1	0
*a*Bellhouse, Ernest, Esq. ..	1	1	0
*a*Hailstone, Rev. S.	0	10	6
	£2	12	6

MOUNTAIN ASH.

Rev. Owen Jones, *Hon. Sec.*

June 8.—By cash .. £1 1*s.* 0*d.*

	£	*s.*	*d.*
*a*George, Isaac, Esq.	0	10	6
*a*Williams, J., Esq.	0	10	6
	£1	1	0

OXFORD.

Rev. G. W. Thatcher, M.A., B.D., *Hon. Sec.*

June 4.—By cash .. £2 15*s.* 6*d.*

	£	*s.*	*d.*
*a*Gray, Rev. G. B.	0	10	6
*a*Mansfield College Library ..	1	1	0
*a*Thatcher, Rev. G. W. ..	0	10	6
Maps	0	13	6
	£2	15	6

PERTH.

Rev. P. A. Gordon Clark, *Hon. Sec.*

April 15.—By cash .. £0 10*s.* 6*d.*

	£	*s.*	*d.*
*a*Robinson, Rev. Grant ..	0	10	6

SINGAPORE.

A. Knight, Esq., *Hon. Sec.*

June 11.—By cash .. £1 1*s.* 0*d.*

	£	*s.*	*d.*
*a*Knight, A., Esq.	1	1	0

VICTORIA (AUSTRALIA).

Rev. Robt. Kelly, *Hon. Sec.*

	£	*s.*	*d.*
April .—By cash ..	1	8	0
Expenses ..	0	3	6
	£1	11	6

	£	*s.*	*d.*
*a*Bennett, Rev. W. E.. ..	0	10	6
*a*Cannam, Rev. W.	0	10	6
*a*Rooney, Rev. Isaac	0	10	6
	£1	11	6

SUMMARY OF LOCAL SOCIETIES.

(Acknowledged in detail under special heading.)

	Sales of Books, Maps, &c.			Lectures.			Subscriptions and Donations.		
	£	*s.*	*d.*	£	*s.*	*d.*	£	*s.*	*d.*
Bangor		—			—		0	10	6
Cardiff		—			—		5	2	0
Clifton and Bristol		—			—		4	12	6
Darlington	0	10	9		—		3	11	6
Dublin		—			—		1	11	6
Dunfermline		—			—		2	16	6
Folkestone		—			—		5	14	0
Glasgow		—			—		1	1	0
Glyn Neath		—			—		1	1	0
Hull		—			—		3	3	0
Jerusalem	0	10	9	2	12	6	7	17	6
Liverpool		—			—		6	5	0
Manchester		—			—		2	12	6
Mountain Ash		—			—		1	1	0
Oxford	0	13	6		—		2	2	0
Perth		—			—		0	10	6
Singapore		—			—		1	1	0
United States of America ..	2	3	3		—		31	0	10
Victoria (Australia) ..		—			—		1	8	0
	£3	18	3	£2	12	6	£83	1	10

SUMMARY OF RECEIPTS.

From March 25th to June 23rd, 1902.

	£	*s.*	*d.*
Annual Subscriptions and Donations	133	10	5
Annual Subscriptions from Local Societies	83	1	10
Proceeds of Lectures	2	12	6
Total Sales of Books, Maps, and other Publications ..	91	0	4
	£310	5	1

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Honorary General Secretary and Lecturer for the Fund.

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FRANCIS KARAM,

Dragoman and Independent Contractor in Jerusalem,

Will be happy to Conduct Travellers through Palestine.

For Statement of Terms, see Advertisement in "Quarterly Statement" for January of this Year and last.

LIST OF DONATIONS AND SUBSCRIPTIONS.

FROM JUNE 24TH, 1902, TO SEPTEMBER 20TH, 1902.

a denotes Annual Subscriber.

*** If any omission or mistake be observed in the following lists, the Secretary will be very glad to be informed of it, and will rectify the error in the next *Quarterly Statement*.

	£	s.	d.
"Anon." (Don.)	5	0	0
*a*Aylmer, General	1	1	0
*a*Barclay, Rev. Thos.	2	2	0
*a*Bentwich, H., Esq.	2	2	0
*a*Bickerton, Mrs. C. B. ..	1	10	6
*a*Blandy, Miss Grace	0	10	6
*a*Bramble, Col. J. R., R.E. ..	21	0	0
*a*Brodrick, Miss, Ph.D. ..	1	11	6
*a*Bullinger, Dr. E. W. ..	2	2	0
*a*Bullock, Admiral C. J. ..	1	0	0
*a*Burrow, Mrs.	0	10	6
*a*Church, The Misses	0	10	6
*a*Clarke, J. Fenn, Esq.	1	1	0
*a*Clarke, Rev. C. P. .. .	1	1	0
*a*Clifford, Rev. W.	0	10	6
*a*Collins, B. H., Esq.	2	0	0
*a*Cook, Mrs.	1	0	0
*a*Cooke, Richard, Esq. (Don.)	0	6	3
*a*Cruikshank, Miss	0	10	6
*a*Cumberland, Major-General. .	0	10	6
*a*Devenish, N. H. W., Esq. ..	1	1	0
*a*Dickie, A. C., Esq.	0	10	6
*a*Dury, Rev. Theodore ..	1	1	0
*a*Elizabeth, Sister Mary ..	0	10	6
*a*Engstrom, Rev. C. R. L. ..	1	1	0
*a*Evans, Franklin G., Esq. ..	1	1	0
*a*Ewing, Rev. William ..	1	1	0
*a*Featherstonhaugh, Rev. W...	1	1	0
*a*Filleul, Rev. S. E. V. ..	1	1	0
*a*Foster, Richard, Esq. ..	2	2	0
Carried forward	£56	10	3

	£	s.	d.
Brought forward	56	10	3
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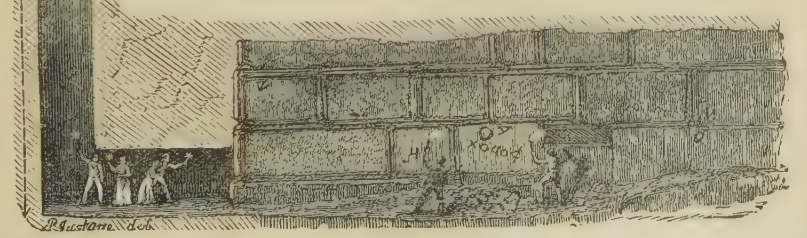

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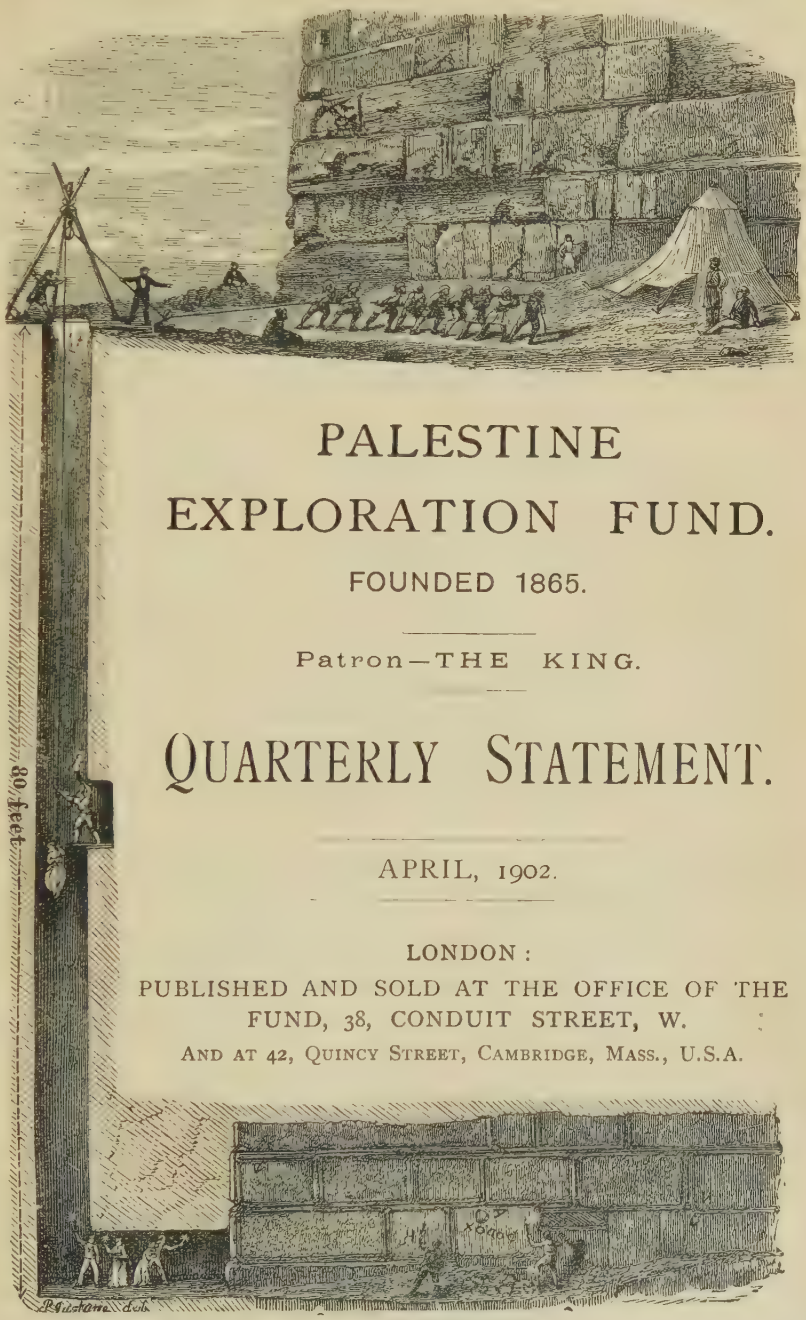

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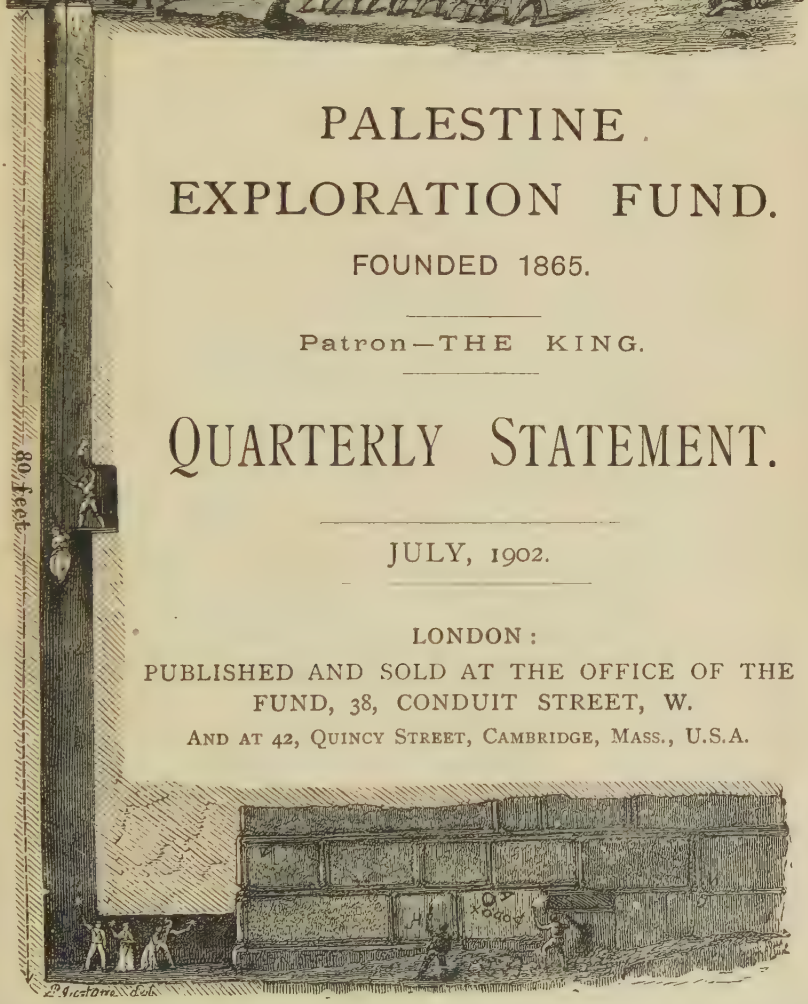

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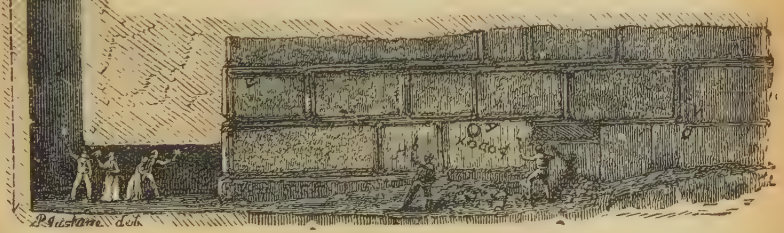

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